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EDITORIAL

THE year 1989 was one of great political upheaval—the greatest, perhaps, since 1848. And in its quieter way the field of ancient philosophy has experienced some effects of some of these changes, as well as new developments of its own.

First, a new development within Plato studies. In September the Second International Plato Symposium was held at Perugia. The organizing host was Professor Livio Rossetti of the Università degli Studi di Perugia; the organizing committee consisted of Giuseppe Cambiano, Thomas Szlezák and Julia Annas. Around seventy scholars from a wide range of countries met to discuss the *Phaedrus*. Professor Rossetti, aided by Dr Ornella Bovi, arranged a wonderful series of receptions and entertainments besides the intellectual ones. And participants were struck not merely by the interest and beauty of Perugia but by the impressive hospitality shown by the University, the Comune di Perugia, the Comune di Bevagna, and the Regione dell'Umbria. We were strongly reminded of the respect for and pride in intellectual and learned activity which is so strong in local Italian public life; non-Italians were frequently wistful or frankly envious about this.

There were seven plenary sessions, with addresses by Christopher Rowe (University of Bristol), Thomas Robinson (University of Toronto), Thomas Szlezák (Universität Würzburg), Tomás Calvo (Universidad de Granada), Conrado Eggers Lan (Universidad de Buenos Aires), Luc Brisson (Université de Paris), Christopher Gill (University of Exeter), Charles Griswold (Howard University), Margherita Isnardi Parente (Università di Roma), Rafael Ferber (Universität Zürich), Claudio Moreschini (Università di Pisa). There were also several workshop sessions in which shorter papers by about thirty scholars were read and discussed.

One of the most pleasing aspects of the conference was the large number of scholars from areas outside North America and Western Europe. China, Korea, and Japan were represented, as was Eastern Europe (Russia, Poland, and Yugoslavia). There were also strong contingents from Latin America, notably Mexico and Argentina.

The conference gave birth, besides its Proceedings, to the

International Plato Society (Associazione Internazionale dei Platonisti, Sociedad Internacional de Platonistas, Internationale Platon-Gesellschaft, Société Platonicienne Internationale). The first committee consists of Christopher Rowe (President), Thomas Robinson, Luc Brisson, Thomas Szlezák, Shinro Kato, and Livio Rossetti. Membership in the International Plato Society costs $30 for three years—clearly a bargain). It is open to anyone who has published an article or completed a doctoral thesis on a Platonic topic in the last fifteen years. Associate membership is open to those engaged in writing such a doctoral thesis. As well as overseeing the publication of the proceedings of the second symposium the committee will organize the third, to be held at Bristol in the last week of August 1992. The organizing host will be Christopher Rowe, and the topic will be the *Statesman*. The committee also plans to produce a bibliographical bulletin, to be circulated to all members, in which all recent articles on Plato will be listed. Enquiries about the third International Plato Symposium and/or the International Plato Society should be addressed to Professor Christopher Rowe, Department of Classics, University of Bristol, 11 Woodland Road, Bristol BS8 1TB, United Kingdom.

One sign of the growing openness and academic freedom in Russia was not just the presence at the conference of three young Russian scholars (Sergei Mouraviev, Andrei Rossius, Yuri Shchigalin) but an announcement they brought with them. One result of *perestroika* has been the establishment of the first private publishing venture since the Revolution. GNOSIS Co-operative publishes in affiliation to the state publishing-house Progress Publishers. One of its first publications is Plato's *Phaedrus*, translated by A. N. Egunov, revised and edited by Y. A. Shchigalin. GNOSIS proposes to publish philosophical works, as well as Russian theological works by Shpet, Losev, and others. To quote from their blurb, 'We would also like to present our services as experienced and qualified translators (into and from foreign languages), and in design and publishing.' GNOSIS's address is: Zubovsky Boulevard 17, Moscow 119847, USSR. Tel: 332-19-49; 242-48-72. Telex: 411800 KEGL.

J.A.

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'THE MORE' AND 'THE FULL': ON THE RECONSTRUCTION OF PARMENIDES' THEORY OF SENSATION IN THEOPHRASTUS, *DE SENSIBUS*, 3–4

ANDRÉ LAKS

It was above all the first part of Parmenides' poem, the criticism of becoming in the name of the impossibility of non-being, which interested the ancients: thanks to Simplicius, we can follow virtually the whole argument retracing the conceptual constitution of the sphere of being, which the poem calls, in a celebrated phrase, 'the unshakeable heart of persuasive truth'.[1] On the other hand, we know far less about the cosmology and the anthropology contained in the second part of the poem; our picture of them is based only upon the last lines of fr. 8, at the hinge of the two parts of the poem, upon a couple of brief and isolated quotations, and upon a series of

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The present text is a modified version of an article published (in French) in *La parola del passato*, 43 (special issue: *La scuola eleatica*; 1988), 262–79. It was presented in 1989 at a meeting of the Association pour l'Encouragement des Études Grecques in Paris and at the Fifth Theophrastus Conference organized by W. Fortenbaugh in Lesbos; also in April 1990 at Princeton University. On the first occasion I profited from the criticism of J. Brunschwig, on the second, that of P. Pellegrin. I would like to thank Glenn W. Most both for his translation and for his suggestions in the course of doing it.

References to Theophrastus' *De sensibus* and to Aetius' doxographic manual are to the edition of H. Diels in *Doxographi Graeci* (Berlin, 1879; 4th edn. 1965). The fragments of the Presocratics are cited according to H. Diels and W. Kranz, *Die Fragmente der Vorsokratiker* (6th edn., Berlin, 1951), and for Empedocles references are also provided to J. Bollack, *Empédocle*, 4 vols. (Paris, 1965–9). Related bibliography includes A. Laks, *Diogène d'Apollonie: La Dernière Cosmologie présocratique* (Cahiers de Philologie, 9; Lille, 1983), and G. Vlastos, 'Parmenides' Theory of Knowledge', *Transactions and Proceedings of the American Philological Association*, 77 (1946), 66–77.

[1] B 1. 29 DK. The reading εὐπειθέος is to be preferred to εὐκυκλέος ('well-rounded'): cf. A. H. Coxon, *Parmenides: The Fragments* (*Phronesis*, suppl. 3; Assen, 1986), 168; D. O'Brien (with J. Frère for French trans.), *Le Poème de Parménide: Texte, traduction, essai critique* (= P. Aubenque (ed.), *Études sur Parménide*, i; Paris, 1987), 11–12.

doxographical summaries.[2] Evidently Parmenides' physics, associated as it was, in the words of the goddess who none the less expounded it, with 'the opinion of mortals', had already been reduced to a subordinate status in the ancient tradition.

This imbalance in the treatment of the two sections is the consequence of an interpretation of Parmenides' thought which Plato inaugurated and Aristotle ratified: the prohibition placed upon non-being was said to entail the impossibility of any physics.[3] Perhaps nothing indicates better the success of these famous texts than the two statements which open the chapter 'On Genesis and Corruption' in book I of Aetius' doxographic manual. Here Parmenides, significantly flanked by his disciples Melissus and Zeno,[4] represents the impossibility of any discourse about the genesis of the world, and thus of physics, for which Empedocles—associated with Epicurus, the physicist *par excellence*—is presented on the contrary as the true founder: (1) 'Parmenides, Melissus, and Zeno suppressed genesis and corruption because they thought that the whole is immobile'; (2) 'Empedocles, Epicurus, and all those who explain the formation of the universe by the agglomeration of tiny corpuscles introduced assemblages and dissociations, but not geneses and corruptions in the proper sense of the terms; for these processes [of assemblage and of dissociation] do not presuppose qualitative alteration but rather quantitative agglomeration.'[5]

[2] The most important one is certainly the report by Aetius which opens the chapter *περὶ τάξεως κόσμου* (2. 1. 1. 335–6 Diels = 28 A 37 DK). It has been completely misunderstood because of the reigning uncertainty, indeed mistrust, with regard to Parmenides' physics; for the use which a reconstruction of Parmenides' cosmological system must make of it, cf. J. Bollack, 'La cosmologie de Parménide', in R. Brague and J.-F. Courtine (eds.), *Herméneutique et ontologie: Mélanges en hommage à Pierre Aubenque* (Paris, 1990), 17–53.

[3] Pl. *Theae.* 180 E 2–4, cf. 152 E 2; Arist. *De caelo*, 3. 1, 298^{b}14–20. Aristotle knows very well, of course, that Parmenides also developed a physics: cf. e.g. *Metaph A* 5, 987^{a}2, cf. *GC.* 2. 3, 330^{b}13–15.

[4] As distinguished from Parmenides, neither Melissus nor Zeno developed a physics. Hence Parmenides is read in the light of the tradition he founds.

[5] *Παρμενίδης Μέλισσος Ζήνων ἀνῄρουν γένεσιν καὶ φθορὰν διὰ τὸ νομίζειν τὸ πᾶν ἀκίνητον.—Ἐμπεδοκλῆς δὲ καὶ Ἐπίκουρος καὶ πάντες ὅσοι κατὰ συναθροισμὸν τῶν λεπτομερῶν σωμάτων κοσμοποιοῦσιν συγκρίσεις μὲν καὶ διακρίσεις εἰσάγουσι, γενέσεις δὲ καὶ φθορὰς οὐ κυρίως· οὐ γὰρ κατὰ τὸ ποιὸν ἐξ ἀλλοιώσεως, κατὰ δὲ τὸ ποσὸν ἐκ συναθροισμοῦ ταύτας γίνεσθαι* (1. 24. 1–2, p. 320 Diels). Stobaeus' version does not contain Zeno's name in the first report; on the other hand, Anaxagoras and Democritus appear between Empedocles and Epicurus in the second one. In this latter case, ps.-Plutarch abridges, as often; in the former, he seems to have wished to reinforce the unity of the Eleatic position. These minor divergences do not affect the centrality of the opposition between the founding fathers, Parmenides and Empedocles.

Yet the doxographer's very statement of the conceptual premisses of any cosmology renders his dissociation of Parmenides and Empedocles problematic. For if the becoming of things and the life of the universe do not presuppose that being is swallowed up into non-being in the course of a process of qualitative alteration but merely that what is is redistributed locally in various combinations, then there is at least one meaning of the term 'being' which permits us to speak of a 'physics of being': so for example in the case of Empedocles, who maintains the integrity of Parmenidean being without in the least being prevented from developing a cosmogony.[6] Of course this does not mean that the relation between the two parts of Parmenides' poem, the passage from the immobility of the sphere of being[7] to the movements of the sphere of the world, is in any way self-evident. But at least we can be certain that Parmenides' poem did not come to an end with its first part, as suggested by the Platonic and Aristotelian presentation which is still reflected in the chapter of Aetius; and we may suspect that the relative discontinuity which results in abandoning a discourse of truth for the sake of opinion, so far from attesting to a rupture of the poem into two heterogeneous parts, instead reflected the way in which the second part was anchored within the first.

The most sensitive interpreters of Parmenides, especially Karl Reinhardt,[8] have not fallen victim to the perspective imposed by the analysis of the ancients and by the state of the poem's transmission, which is as it were the material reflection of that analysis. They have recognized in Parmenides the author of a genuine physics, whose importance they have emphasized, both for a comprehensive interpretation of Parmenides' poem and for the influence which it was capable of exerting upon Empedocles' *Peri physeos.* Under the aegis of this physicist, and pre-Empedoclean, Parmenides of the second part of the poem, I propose to analyse here the context of the quotation of fr. 16 DK in Theophrastus' *Treatise on Sensations.*[9] My aim is to show

[6] Cf. fr. 31 B 17. 30–5 DK (= 31 Bollack).

[7] This is not the same thing as 'the immobility of the whole', as the doxographer, following Plato and Aristotle, glosses it.

[8] K. Reinhardt, *Parmenides und die Geschichte der griechischen Philosophie* (Bonn, 1916; 3rd edn. Frankfurt am Main, 1977), 16 ff.

[9] J. P. Herschbell, 'Parmenides' Way of Truth and B 16', *Apeiron*, 4 (1970), 1–23, has suggested that the fragment ought rather to belong to the first part of the poem; but it is hard to see how, if it is true that the duality of the elements, which the fragment certainly presupposes (cf. the beginning of Theophrastus' report: δυοῖν ὄντοιν στοιχείοιν), has no place there.

how Theophrastus, by the use which he makes of the term *συμμετρία* in his critical summary of Parmenides' theory of sensations, would have authorized the doxographical tradition (of which he is one of the primary sources) to rank Parmenides, no less than Empedocles and Epicurus, under the banner of a physics which respected the integrity of being, that is, in the terms of Aetius' report, of a physics of quantity and of aggregates. This demonstration analyses the way in which Theophrastus interprets fr. 16 and rereads closely the first part of Theophrastus' report, which presents itself in part as its exegesis. Here is the whole of that report, replaced, as it must be, within the larger context constituted by the treatise's first lines:[10]

(1) *Περὶ δ' αἰσθήσεως αἱ μὲν πολλαὶ καὶ καθόλου δόξαι δύ' εἰσίν· οἱ μὲν γὰρ τῷ ὁμοίῳ ποιοῦσιν, οἱ δὲ τῷ ἐναντίῳ. Παρμενίδης μὲν καὶ Ἐμπεδοκλῆς καὶ Πλάτων τῷ ὁμοίῳ, οἱ δὲ περὶ Ἀναξαγόραν καὶ Ἡράκλειτον τῷ ἐναντίῳ . . .* (2) *. . . περὶ ἑκάστης δὲ τῶν κατὰ μέρος οἱ μὲν ἄλλοι σχεδὸν ἀπολείπουσιν, Ἐμπεδοκλῆς δὲ πειρᾶται καὶ ταύτας ἀνάγειν εἰς τὴν ὁμοιότητα.* (3) [*Παρμενίδου*] *Παρμενίδης μὲν γὰρ ὅλως οὐδὲν ἀφώρικεν ἀλλὰ μόνον ὅτι δυοῖν ὄντοιν στοιχείοιν κατὰ τὸ ὑπερβάλλον ἐστὶν ἡ γνῶσις. ἐὰν γὰρ ὑπεραίρῃ τὸ θερμὸν ἢ τὸ ψυχρόν, ἄλλην γίνεσθαι τὴν διάνοιαν, βελτίω δὲ καὶ καθαρωτέραν τὴν διὰ τὸ θερμόν· οὐ μὴν ἀλλὰ καὶ ταύτην δεῖσθαί τινος συμμετρίας·*

> *ὡς γὰρ ἑκάστοτε, φησίν, ἔχει κρᾶσιν μελέων πολυπλάγκτων,*
> *τὼς νόος ἀνθρώποισι παρέστηκεν· τὸ γὰρ αὐτό*
> *ἔστιν ὅπερ φρονέει μελέων φύσις ἀνθρώποισι*
> *καὶ πᾶσιν καὶ παντί· τὸ γὰρ πλέον ἐστὶ νόημα.*

(4) *τὸ γὰρ αἰσθάνεσθαι καὶ τὸ φρονεῖν ὡς ταὐτὸ λέγει, διὸ καὶ τὴν μνήμην καὶ τὴν λήθην ἀπὸ τούτων γίνεσθαι διὰ τῆς κράσεως· ἂν δ' ἰσάζωσι τῇ μίξει, πότερον ἔσται φρονεῖν ἢ οὔ, καὶ τίς ἡ διάθεσις, οὐδὲν ἔτι διώρικεν. ὅτι δὲ καὶ τῷ ἐναντίῳ καθ' αὑτὸ ποιεῖ τὴν αἴσθησιν φανερόν, ἐν οἷς φησι τὸν νεκρὸν φωτὸς μὲν καὶ θερμοῦ καὶ φωνῆς οὐκ αἰσθάνεσθαι διὰ τὴν ἔκλειψιν τοῦ πυρός, ψυχροῦ δὲ καὶ σιωπῆς καὶ τῶν ἐναντίων αἰσθάνεσθαι, καὶ ὅλως δὲ πᾶν τὸ ὂν ἔχειν τινὰ γνῶσιν. οὕτω μὲν οὖν αὐτὸς ἔοικεν ἀποτέμνεσθαι τῇ φάσει τὰ συμβαίνοντα δυσχερῆ διὰ τὴν ὑπόληψιν.*

The four lines of fr. 16 are also transmitted by Aristotle at *Metaph.* *Γ* 5, 1009^{b}22–5.[11] But the contexts are different. Aristotle quotes the

[10] The text is that of H. Diels, *Doxographi Graeci*, 499–500. In the course of the following analysis I shall suggest some changes in punctuation.

[11] The two traditions present some textual variants, particularly in line 1. It is not necessary to discuss them here; it seems fairly clear that Theophrastus preserves the wording of the poem. As for the subject of *ἔχει*, it might be either *νόος*, taken from line 2 (B. Cassin and M. Narcy, 'Parménide sophiste: La citation aristotélicienne du fragment

group of verses to illustrate the thesis according to which Parmenides, like all the other ancient physicists (Empedocles, Anaxagoras, Democritus), fails to distinguish between sensation and thought. Theophrastus, on the other hand, starts out from this observation, which he simply mentions after the quotation, in order to discover, in verses dedicated to the cognitive function, the rudiments of a genuine theory of sensation, one in which Aristotle is naturally not interested within the framework of an argument designed to explain how excessive confidence in the contradictory information provided by the senses leads to neglect of the principle of contradiction.[12]

Not all the information reported by Theophrastus in his summary of Parmenides' theory of sensation derives from the fragment. This is true not only of the part of the summary which follows the quotation (with, especially, the mention of the corpse perception, for which Theophrastus explicitly invokes another group of verses),[13] but also of the opening section; in particular, there is no mention in fr. 16 that the hot is in any way superior from the cognitive point of view.[14] For just what reason(s), then, did Theophrastus mobilize these four lines, divorcing them from an argument manifestly dedicated to different aspects of human knowledge?

To this question the commentators have most often furnished only an implicit answer, and one which, though it is based upon an apparently obvious interpretation of the first sentence of the report, *Παρμενίδης μὲν γὰρ ὅλως οὐδὲν ἀφώρικεν* . . ., is in my opinion mistaken. Traditionally this phrase is understood to mean that, with regard to sensation, which is the object of Theophrastus' inquiry, 'Parmenides defined absolutely nothing', but that, since he assimilates knowledge (*γνῶσις*) to sensation (*αἴσθησις*)—in virtue of Aristotle's analysis—in his case the explanation of the mechanism of sensation is identical to that of knowledge. Since knowledge is produced 'in accordance with what prevails', according to the interpretation which Theophrastus gives of the fragment's last hemistich (*τὸ γὰρ πλέον ἐστὶ νόημα*), Parmenides would then be explaining sensation by the

XVI', in P. Aubenque (ed.), *Études sur Parménide*, ii. *Problèmes d'interprétation* (Paris, 1987), 277–93, at p. 288, following Diels), or, as I would prefer (following a suggestion of H. Wismann), a word like *τὰ στήθη*: cf. Aetius, 4. 5. 5 *Παρμενίδης καὶ Ἐπίκουρος ἐν ὅλῳ τῷ θώρακι* (sc. *τὸ ἡγεμονικὸν εἶναι*).

[12] 1009^{b}12–15.

[13] Cf. likewise the explanation of memory and forgetting.

[14] *βελτίω δὲ καὶ καθαρωτέραν τὴν διὰ τὸ θερμόν*.

preponderance of one of the two elements over the other (*κατὰ τὸ ὑπερβάλλον ἐστὶν ἡ γνῶσις*).

Now the idea of 'preponderance' implies analytically two other notions, namely those of 'mixture' and of 'proportion'. For if there is to be preponderance of one of the two elements over the other, the two elements must necessarily enter into composition, and hence belong to a *mixture*. The distribution of the elements within a given mixture will then determine a certain *proportion* between the elements, whose particular form will be the *superiority* or *preponderance* of one element over the other. Thus, on the traditional reading, Theophrastus' interpretation of fr. 16 can be summarized in three points:

1. Theophrastus derives the most general idea, that of *mixture*, from the first two lines of the fragment, which mention the *κρᾶσις* of the 'members'.[15]

2. He extracts the most specific idea, that of *preponderance*, from the term *τὸ πλέον*, 'the more'.

3. As for the idea of *proportion*, it is represented in the fragment only by the balance of *ὡς ... τὼς ...* From this expression of cognition's dependence upon the mixture's particular nature, Theophrastus extracts the determinate concept of *συμμετρία*, understood as the proportion among the mixture's constitutive parts.

This distribution seems problematic to me, as does the idea, with which it is linked, that Parmenides explained sensation by the preponderance of one element in a mixture over the other. To be sure, it cannot be denied that the beginning of Theophrastus' report develops the idea of a variation in the *mixture* of elements, and that the first two lines of the fragment correspond to this idea. On the other hand, I suggest that we must abandon the interpretation which makes of *τὸ ὑπερβάλλον* in Theophrastus' report the equivalent of *τὸ πλέον* in Parmenides' fragment and which on this basis connects it with the notion of *συμμετρία*. As we shall see, this has consequences for the way in which the very function of the mixture in Parmenides' account must be understood. For even if it is certain that the mixture has a role to play in Parmenides' theory of the cognitive faculties, this role cannot be the one which it has hitherto been assigned. In fact, it can be

[15] The interpreters are divided on the question of whether these are the members of the human body or members of the universe, i.e. (metaphorically) the two elements. The latter seems to me to be the case. Cf. Empedocles, frr. 31 B 30. 2 DK (= 126 Bollack), 35. 11 (= 201 Bollack).

argued—and this will be the guiding thought of my demonstration—that within the logic of Parmenides' system the sensory process does not require any *mixture* of the two elements. What the mixture explains is merely the particular nature of this or that sensation: its quality, not its production.

I shall begin with the problem posed by τὸ πλέον in the last phrase of the quotation. It will be helpful to distinguish here between the meaning of the expression in Parmenides and the interpretation which Theophrastus could have given of it. Ever since Zeller, and until relatively recently, commentators regularly translated τὸ πλέον by 'the more', in the belief that τὸ ὑπερβάλλον in Theophrastus constitutes its paraphrase, and is adequate as a paraphrase.[16] Now this interpretation presents a serious disadvantage: it makes it very difficult to give a coherent account of the concatenation of arguments within the fragment. Here is the outline of that concatenation, as I understand it:[17] first Parmenides asserts, in lines 1–2a, the dependence of apprehension (νόος) upon the mixture of the elements; then he justifies this first assertion by stating in 2b–4a that each element within the mixture, considered in its own 'nature'—this is how I would interpret μελέων φύσις, in opposition to κρᾶσις μελέων in the preceding lines, which refers to the mixture of the two elements—thinks 'the same', namely itself (the hot in the case of the hot, the cold in the case of the cold).[18] Hence the last phrase must show (or recall) what this elementary thought consists in.[19] Now it is at this point that

[16] Cf. E. Zeller, *Die Philosophie der Griechen in ihrer geschichtlichen Entwicklung*, rev. W. Nestle (6th edn., Leipzig, 1919–23; repr. Darmstadt, 1963), 720, whose opinion prevailed at least until W. J. Verdenius, *Parmenides: Some Comments on his Poem* (Groningen, 1942), 17–18. This is still the position of U. Hölscher, *Parmenides: Vom Wesen des Seienden* (Frankfurt am Main, 1969), 112, with n. 128, and of Coxon, *Parmenides*, p. 247 (cf. p. 250).

[17] I differ at certain points from current interpretations; a detailed justification will be given in a separate study.

[18] The predicative construction of τὸ . . . αὐτὸ ὅπερ suggested by Coxon, *Parmenides*, 250, is at first sight attractive (cf. the parallels cited ad loc.): 'for it [sc. the mind] is the same as the awareness belonging to the nature of the body.' But is this equivalent to '. . . is the same thing as what the nature of the members thinks'? Coxon seems to replace the object of thought (ὅπερ φρονέει) by the activity itself ('awareness'), in order to make the equation possible. It seems better to suppose that τὸ . . . αὐτό, strongly emphasized by its position at line-end, refers to the identity of what thinks (the element) with what it thinks (itself). Another disadvantage of Coxon's interpretation is that it does not distinguish κρᾶσις from φύσις (μελέων φύσις = 'the physical constitution of the body', p. 250).

[19] νόημα, as distinct from νόος, refers not to the faculty, but to a concrete instance of thinking (cf. H. Fränkel, 'Parmenidesstudien', *Nachrichten von der Gesellschaft der*

the argument runs into a stumbling-block. For in fact it is hard to see how, if τὸ πλέον means 'the more', quantitative superiority, with the relation between two elements which it presupposes, could explain (γάρ) the idea, as it should, that—to use Theophrastus' terminology—the similar perceives the similar.[20]

Now the form of the neuter πλέον can derive not only from the comparative πλέων, 'bigger', but just as well from πλέος (epic for πλέως), neuter πλέον, 'full'. As the luck of the transmission would have it, the neuter is attested in this meaning in another fragment belonging to the second part of the poem.[21] And a proposition according to which 'the full is thought' would be connected much better with what immediately precedes than would 'the more is thought'. The idea is then that in every act of thought the integrity of the element in its original identity is reconstituted, of course on a smaller scale.[22] This interpretation is not only coherent in itself but also has the advantage that it establishes a further correspondence between the two parts of the poem: to the celebrated identity of being

Wissenschaften zu Göttingen, phil.-hist. Kl. 2 (1930), 155–92, at p. 174, who speaks of νόημα as 'ein vollzogener Akt'); this interpretation is to be preferred to the one which sees in νόημα the content of the thought ('the full is the sole *content* of thought': D. Gallop, *Parmenides of Elea: Fragments* (*Phoenix*, suppl. 18; Toronto, Buffalo, and London, 1984), 87), or, if I have understood the note of K. von Fritz ('Nous, noein and their Derivatives in Pre-Socratic Philosophy (Excluding Anaxagoras)', *Classical Philology*, 40 (1945), 223–42, ibid. 41 (1946), 12–34 = A. Mourelatos (ed.), *The Pre-Socratics: A Collection of Critical Essays* (New York, 1974), at p. 51 n. 95), the pure and simple equivalent of νόος (Eur. *El.* 439 calls Achilles κοῦφον ἅλμα ποδῶν, which means, not that he is a jump, but that he is capable of effecting one).

[20] This difficulty led Hermann Fränkel, in his 'Parmenidesstudien', to recognize that the last γάρ is obscure ('ungedeutet ist hierbei aber das γάρ [the one in line 4]', p. 174); cf. likewise id., *Wege und Formen frühgriechischen Denkens* (Munich, 1951; 2nd edn. 1960), 175 [from the revised version of the 'Parmenidesstudien' on pp. 157–97]; G. Calogero, *Studi sull'eleatismo* (Rome, 1932), 46 n.; L. Tarán, *Parmenides* (Princeton, 1965), 256–7 ('τὸ πλέον as "the more" would break the logical connection ... between the two last sentences'). In his 'Parmenidesstudien' of 1930, p. 174 n. 1, H. Fränkel mentions the possibility that the particle might not refer to the immediately preceding clause (cf. Denniston, *Greek Particles*, 2nd edn., 64–5: 'Successive γάρ's have the same reference'); this solution, which seems artificial to me, is now adopted by O'Brien, *Le Poème de Parménide*, 74.

[21] According to 9. 3 'everything is full, πλέον, simultaneously of light and of invisible night'; cf. 8. 24. The connection was noted by J. Bollack, 'Sur deux fragments de Parménide (4 et 16)', *Revue des études grecques* (1957), 56–71, at pp. 68–9; M. Untersteiner, *Parmenide: Testimonianze e frammenti* (Florence, 1958), pp. ccv–ccvi n. 134; J. Mansfeld, *Die Offenbarung des Parmenides und die menschliche Welt* (Assen, 1964), 190.

[22] Mansfeld, *Offenbarung*, 193, rewrites the concatenation starting from the last phrase, which is also the first from a logical point of view: '1. das plenum *ist* Gedanke; 2. deshalb denken die Elemente ...'

and true thought, asserted in B 3 (cf. B 8. 34), now corresponds an identity between the two elementary forms on the one hand and the variable thought of men on the other.[23] Whatever the remaining divergences in their interpretations of the rest of the fragment, it is easy to see why, ever since Jean Bollack in 1957 and Mario Untersteiner in 1958 independently made the suggestion, a consensus has been growing among the interpreters that Zeller's interpretation should be rejected and fr. 16 of Parmenides should be read taking τὸ πλέον in the sense of 'full'.[24]

Naturally, the new interpretation has consequences for the doxography of Theophrastus. For if τὸ πλέον must indeed be understood as 'the full' and if Theophrastus took it to mean 'the more' (τὸ ὑπερβάλλον), his summary is based upon a mistake. Some of the interpreters who understand τὸ πλέον in Parmenides as 'the full' have drawn this conclusion explicitly;[25] it is implicit among others. The situation which has thereby been created is rather strange: since none of these interpreters would deny the pertinence of the idea of 'preponderance' in the explanation of the mechanism of knowledge in Parmenides, they seem committed to the notion that Theophrastus managed to light upon the correct explanation of the doctrine as it were by chance, on the basis of a semantical misunderstanding. Perhaps then we should ask whether Theophrastus might not after all have understood correctly the fragment which serves as the basis for his reconstruction.[26] To explore this hypothesis, however, requires

[23] Cf. esp. K. Deichgräber, *Parmenides' Auffahrt zur Göttin des Rechts* (Abh. Mainz Akad. d. Wiss., 1958, 11; Wiesbaden, 1959), 71: 'Dieses Bruchstück dürfte das Gegenstück zu dem vielzitierten Vers des ersten Teils sein . . . τὸ γὰρ αὐτὸ νοεῖν ἐστίν τε καὶ εἶναι. Die vier Verse des zweiten Teils waren die Übersetzung des Denkens = Seinsgedankens in die Krasiswelt der ins Prinzipielle erhobenen Anschauung der Menschen.' Similarly Bollack, 'Sur deux fragments', 68. (See also the review of Deichgräber, *Gnomon*, 38 (1966), 326.)

[24] Cf. Bollack, 'Sur deux fragments', 68–9; Untersteiner, *Parmenide*, pp. ccv–ccvi n. 134; Deichgräber, *Parmenides' Auffahrt*, 71; Taran, *Parmenides*, 256 ff.; Mansfeld, *Offenbarung*, 191–2; A. Mourelatos, *The Route of Parmenides* (New Haven and London, 1970), 253–4; Gallop, *Parmenides*, 87. For the proponents of the opposite view, cf. above, n. 16.

[25] Mansfeld, *Offenbarung*, 192; Taran, *Parmenides*, 257–8 (cf. H. Fränkel, *Wege und Formen*, 175).

[26] The fact that Alexander, in his commentary on bk. *Γ* of Aristotle's *Metaphysics*, undeniably understands τὸ πλέον as τὸ ὑπερβάλλον (pp. 306. 34–307. 3 Hayduck) tended to reinforce the conviction that the error went back to Theophrastus, to whom scholars seem inclined to attribute such mistakes anyway (cf. H. Fränkel, *Dichtung und Philosophie des frühen Griechentums* (2nd edn., Munich, 1962), 413 n. 31, on Parmenides, fr. 12. 2). The text of Alexander is certainly disquieting; but it is hard to draw any

that we return to the summary itself, and first of all to the sentence which introduces it: *Παρμενίδης μὲν γὰρ ὅλως οὐδὲν ἀφώρικεν.*

The meaning of this first sentence depends upon how the text is articulated. In general, the commentators make the report begin with the name of Parmenides (*Παρμενίδης*). Doubtless this is a matter of convenience, inherited from the presentation of the passage in the collection of Diels–Kranz;[27] this tendency may have been reinforced, as it were optically, by the accidental insertion of the marginal note [*Παρμενίδου*] before *Παρμενίδης* in the transmitted text. In that case, one understands quite naturally that Parmenides defined nothing whatsoever with regard to the question which is the central object of the treatise, namely sensation.[28] But, reinserted within its context, the sentence does not say precisely that. The report on Parmenides begins Theophrastus' illustration of his statement that, of the three philosophers who took 'the similar' as their principle of explanation, namely Parmenides, Empedocles, and Plato, only Empedocles undertook to detail the mechanism of each particular sense, namely sight, hearing, smell, taste, and touch, as opposed to a global explanation of the mechanism of sensation.[29] Hence one must read without interruption: *περὶ ἑκάστης δὲ τῶν κατὰ μέρος οἱ μὲν ἄλλοι σχεδὸν ἀπολείπουσιν, Ἐμπεδοκλῆς δὲ πειρᾶται καὶ ταύτας ἀνάγειν εἰς τὴν ὁμοιότητα. Παρμενίδης μὲν γὰρ ὅλως οὐδὲν ἀφώρικεν ἀλλὰ μόνον ὅτι . . .* On this reading, what Parmenides did not define at all is not sensation, but the distinctive mechanism of each of the five senses.

conclusions in the absence of any systematic study of the doxography of the Presocratics in Alexander.

[27] Cf. 28 A 46 DK.

[28] A particularly clear formulation of this traditional position can be found in Coxon, *Parmenides*, 247. The same meaning would result from detaching *ὅλως* from *οὐδέν* so as to refer it to *ἀφώρικεν*: the formula 'he defined nothing in a general way' would refer to a general theory of sensation, as opposed to a general theory of knowledge. One of course expects that *ὅλως* should be linked to *οὐδέν* (cf. LSJ, s.v. *ὅλος*, III. 3).

[29] From a strictly formal point of view, *περὶ ἑκάστης* (sect. 2, p. 499. 11) corresponds to *καθόλου* (sect. 1, p. 499. 1). One might therefore think that the lines *περὶ ἑκάστης δὲ τῶν κατὰ μέρος οἱ μὲν ἄλλοι σχεδὸν ἀπολείπουσιν, Ἐμπεδοκλῆς δὲ πειρᾶται καὶ ταύτας ἀνάγειν εἰς τὴν ὁμοιότητα* bear on both those who take the similar and those who take the different as their principle, and so represent the conclusion of the introductory paragraph. But *εἰς τὴν ὁμοιότητα* shows that we have in fact already returned to the first group. So it seems that *οἱ μὲν ἄλλοι* refers more specifically to Plato and Parmenides. As a matter of fact, it would probably not be true to say that all other philosophers except Empedocles neglected to explain the various senses, even if Empedocles goes into more detail than anyone else (see e.g. Theophrastus' report concerning Anaxagoras and Diogenes of Apollonia). Thus, by a kind of compositional zeugma, the conclusion constitutes simultaneously the beginning of the new development.

For example, one will not find in him any specific explanation of sight or of hearing. Grammatically, the interpretation that I propose amounts to supplying *περὶ ἑκάστης τῶν κατὰ μέρος* with *ὅλως οὐδὲν ἀφώρικεν*: the ellipse involved should not present any difficulty, given the close connection between the two propositions linked by *γάρ* (*ὅλως οὐδὲν ἀφώρικεν* = *ἀπολείπει*). Naturally, this does not at all imply that Theophrastus found in Parmenides a theory of sensation in general, in the sense that Parmenides failed to speak of the five senses but did speak explicitly of sensation. It remains true that Parmenides spoke explicitly only about knowledge, as the positive part of the sentence shows: *ἀλλὰ μόνον ὅτι δυοῖν ὄντοιν στοιχείοιν κατὰ τὸ ὑπερβάλλον ἐστὶν ἡ γνῶσις*. But precisely because Theophrastus starts from the hypothesis that Parmenides' theory of sensation is identical with his theory of knowledge,[30] he is correct in suggesting that Parmenides has perfectly 'defined' the nature of sensation in general; his only complaint is directed to Parmenides' lack of specification.[31] That this is indeed the scope of the phrase is confirmed by the fact that the two following sections, devoted to Plato and to Empedocles, begin by recalling the respective merits of these two authors with regard to the treatment of the particular senses. From Parmenides to Plato there is progress, to the extent that Plato 'discusses the particular senses more'; nevertheless, Plato remains inferior to Empedocles, since Plato only deals with sight and hearing, while Empedocles discusses all equally.[32] This progression explains, by the way, why, in contrast to Theophrastus' procedure in the first paragraph of the treatise, where Parmenides, Empedocles, and Plato are cited in chronological order, in the detailed exposition Plato precedes Empedocles. Parmenides comes first not because he is the oldest, but because, on the question of the five senses, he is the poorest.

The difference between the traditional interpretation of the clause *Παρμενίδης μὲν γὰρ ὅλως οὐδὲν ἀφώρικεν* and the one which I am proposing here could involve merely a nuance, if it did not have an obvious impact upon the meaning of the positive clause. For if the

[30] Cf. p. 5.

[31] This reading precludes the temptation to take *ὅλως . . . ἀφώρικεν* together (cf. above, n. 28).

[32] *Πλάτων δὲ ἐπὶ πλέον μὲν ἥπται τῶν κατὰ μέρος, οὐ μὴν εἴρηκέ γε περὶ ἁπασῶν, ἀλλὰ μόνον περὶ ἀκοῆς καὶ ὄψεως* (sect. 5); *Ἐμπεδοκλῆς δὲ περὶ ἁπασῶν ὁμοίως λέγει καί φησι τῷ ἐναρμόττειν εἰς τοὺς πόρους τοὺς ἑκάστης αἰσθάνεσθαι* (sect. 7).

negation refers to the particular senses, the limiting phrase *ἀλλὰ μόνον ὅτι* can no longer be understood as if Parmenides had, upon further consideration, something to say after all about sensation in general (namely, by means of his theory of knowledge). Rather, the idea must be that, in spite of the fact that Parmenides' theory of knowledge does not define the mechanism of the different senses, it nevertheless does give an account of a *certain* diversity, namely of the variations of apprehension. On this hypothesis, the accent in the sentence will have to be placed on *κατὰ τὸ ὑπερβάλλον*. Knowledge, and hence sensation, *varies as a function* of the two constitutive elements present in the mixtures.[33] Now this is precisely the object of the fragment. This point is made even more obvious, if that were necessary, when this passage is read in the light of the poetic tradition within which it is inscribed: the first two lines constitute a reworking of the famous Homeric distich 'for the thoughts of men on the earth change according to the days which the father of the living allots them', already reworked by Archilochus.[34] In Parmenides the instability of thought is no longer explained by Zeus and the day he brings on, but by the mixture of the elements which constitute both man and the universe.[35] In this perspective, the beginning of Theophrastus' report (up to *ἄλλην γίνεσθαι τὴν διάνοιαν*) offers a pertinent paraphrase of the first two lines of the fragment, so much so that one can think that Theophrastus read *τὸ ὑπερβάλλον*, or its Parmenidean equivalent, in the immediate context of the quotation (before the first line, for example).

A number of consequences follow from this reading, both for Parmenides' theory of knowledge and for Theophrastus' doxography. First of all, and this is an essential point, knowledge-sensation in

[33] This is why it is surely better to understand the comparative expression *τὸ ὑπερβάλλον* distinctively, not generically, and to translate 'knowledge is produced according to that one of the two elements which prevails'.

[34] Homer: *τοῖος γὰρ νόος ἐστὶν ἐπιχθονίων ἀνθρώπων | οἷον ἐπ' ἦμαρ ἄγῃσι πατὴρ ἀνδρῶν τε θεῶν τε* (*Od.* 18. 136–7); Archilochus: *τοῖος ἀνθρώποισι θυμός, Γλαῦκε, Λεπτινέω πάϊ, | γίνεται θνητοῖς, ὁκοίην Ζεὺς ἐφ' ἡμέρην ἄγῃ, | καὶ φρονεῦσι τοί', ὁκοίοις ἐγκυρέωσιν ἔργμασιν* (fr. 68 Diehl).

[35] The lability of human thoughts is thus anchored in the relative identity of the two elements. Besides, the logic of Parmenides' position would seem to entail that thought should not be the prerogative of men. The end of Theophrastus' summary confirms this: *καὶ ὅλως δὲ πᾶν τὸ ὂν ἔχειν τινὰ γνῶσιν*. This is also Empedocles' thesis with regard to the four elements (cf. the text cited below, n. 38). But it seems difficult to find this idea within fr. 16 itself. Line 3 does not seem to assert that what is the case for man is also the case for everything, but rather that what is the case for men in general is also the case for every man in particular.

Parmenides does not necessarily depend as such upon any *mixture* of the two elements. Instead, each of the two elements perceives and knows by itself. This does not at all exclude, but on the contrary implies, that every actual act of knowledge will be *differentiated* as a function of the particular mixtures. For the world of Parmenides results from the mixture of the two opposed elements, and neither the hot nor the cold has existed any longer in its original purity[36] ever since the bright and dark rings began to mix amorously under the goddess's guidance at the stage of primitive acosmia.[37] But it remains true that what is endowed with the power of perception is not the mixture, in opposition to each of its constituents. On the contrary, the only reason that the mixture perceives is that the elements which make it up possess the faculty of perception.

It is rather surprising that the commentators have not seen this point. The idea is familiar among the ancient physicists: thus Empedocles attributes to each element its part of perception and of thought.[38] Moreover, Theophrastus himself attributes this thesis to Parmenides. In fact, he does so twice. This is quite clear in his criticism towards the end of his report: 'The fact that, on the other hand, Parmenides also founds sensation upon the contrary, taken in itself, is obvious where he says that the corpse does not perceive light, heat, and sound, because of its loss of fire, but well perceives cold, silence, and the contraries.' Naturally a corpse, like everything else in the world of becoming, is not made up of cold in its pure state, but is instead a mixture where the cold strongly outweighs the hot. So too, Theophrastus' summary does not imply that the corpse is a case of cold perceiving by itself. The example of the corpse merely *indicates* that the contrary of the hot, namely the cold, 'likewise produces the perception by itself', καθ' αὑτό; the prepositional phrase may well be an explicit reminiscence of the formula κατ' αὐτό in B 8. 58.[39]

Theophrastus' formulation is precise: it follows from the adverbial

[36] Or, as Parmenides puts it at B 8. 57 and 58 with regard to fire and the night, 'everywhere identical to itself' (ἑαυτῷ πάντοσε τωὐτόν) and 'by itself' (κατ' αὐτό); cf. B 8. 29.

[37] 28 B 12 DK. The very juxtaposition of the 'unmixed' rings of fire and night can be considered as a first form of mixture (prior to mixtures strictly speaking), to the degree that the two elementary forms, at first compact (B 8. 56–9), have already been disjoined.

[38] 'Know that all have their sense and their part of thought' (πάντα γὰρ ἴσθι φρόνησιν ἔχειν καὶ νώματος αἶσαν, 31 B 110. 10 DK = 699 Bollack).

[39] Cf. n. 36. Nevertheless, it is surely useless to write καθ' αὑτό for κατ' αὐτό in the text of Parmenides, as suggested by Deichgräber, *Parmenides' Auffahrt*, 56–7 n. 1 (cf. Tarán, *Parmenides*, 217 n. 39).

καί (in ὅτι δὲ καὶ τῷ ἐναντίῳ καθ' αὑτὸ ποιεῖ τὴν αἴσθησιν) that the second of the two elements, namely the hot, perceives *also* 'by itself'. In fact Theophrastus already mentioned this point earlier, in his exposition of the doctrine. For the clause βελτίω δὲ καὶ καθαρωτέραν τὴν διὰ τὸ θερμόν does not mean, as it is usually understood, that a thought in which the hot *dominates* is 'better' than a thought in which the cold dominates, as for example the corpse's; of course this is true, but only because, in an absolute manner, the thought which belongs to the hot, for which the hot is responsible as such, is superior (βελτίω)[40] to the one which results from the cold.

The interpreters may have been led astray by the traditional punctuation, a comma after διάνοιαν.[41] For my part I would prefer to print a raised point. The fact that τὴν διὰ τὸ θερμόν takes up τὴν διάνοιαν does not speak against a strong punctuation. It may be added in favour of this new articulation that it enables us to find in the report on Parmenides the first example of a compositional pattern which recurs throughout Theophrastus' treatise: after the exposition of the mechanism of the sensations, each section is regularly devoted to the conditions for the *excellence* of sensations within the same species or among the various animal species.[42] In the case of Parmenides, this question necessarily becomes confused with that of the superiority of the bright heat over the dark night, since Parmenides did not describe the mechanism of the various senses.

The impact of this interpretation upon the understanding of the term συμμετρία in the clause which immediately precedes the quotation of fr. 16 is obvious. Traditionally, the commentators have been misled by the weak punctuation between ἄλλην γίνεσθαι τὴν διάνοιαν and βελτίω δὲ καὶ καθαρωτέραν τὴν διὰ τὸ θερμόν, and have generally taken the term συμμετρία, in οὐ μὴν ἀλλὰ καὶ ταύτην δεῖσθαί τινος συμμετρίας, to refer to a certain 'proportion' between

[40] This surely means simultaneously finer and more precise (cf. below) and axiologically superior. For it seems to be the case that the doubling of the sphere of being in the two elementary forms in Parmenides is dissymetric. This is at least what is implied by the celebrated and much-discussed testimony of Aristotle, according to which the hot (the fire) corresponds to being, the cold (here represented by the earth) to non-being (*Metaph. A* 5, 986^{b}34–987^{a}2). I hope to return soon to this difficult problem, which is certainly central to the understanding of the relation of the two parts of the poem.

[41] This is the text of Diels, reproduced above.

[42] Cf. sect. 11, p. 502. 14–24 (Empedocles); sects. 29–30, pp. 507. 26–508. 4 (Anaxagoras); sects. 44–5, pp. 511. 23–512. 10 (Diogenes of Apollonia).

the hot and the cold within a given mixture. Theophrastus would then be saying that the superiority of the mixture in which the hot dominates does not depend only upon the preponderance of the hot, but also upon a 'determinate proportion' (τινος συμμετρίας) between the hot and the cold.[43] On this hypothesis, it would be this point which the first distich of the fragment was thought to illustrate, συμμετρία being as it were the abstract translation of ὡς ... ἑκάστοτε ... τὼς ...[44] But the interpretation of συμμετρία as the proportion of the two elements in the mixture is not free from difficulties. Hermann Fränkel noted quite rightly that the term συμμετρία, which recurs several times in the *De sensibus*, is never used there to refer to the proportion between the constitutive elements of a mixture, but always terminologically to express the idea that 'an organ of perception is commensurable with its object and so arranged as to receive it adequately'.[45] This usage derives most probably from Plato's analysis of sight in the *Timaeus*,[46] and there are good reasons to think that Theophrastus is directly inspired by this text in his reconstruction of the Presocratic theories of sensation, and of Empedocles' in particular.[47] To be sure, Fränkel does not mention that what is true of the noun συμμετρία does not hold for the adjective σύμμετρος, which occurs just as often in the treatise but which Theophrastus uses not only in the sense of 'well-proportioned' = 'adapted' but also in that of 'well-proportioned' = 'tempered'.[48] Hence it cannot be excluded that Theophrastus might exceptionally have used the noun to refer to the 'balance' of the elements within a mixture. But is not the meaning

[43] Cf. e.g. Coxon, *Parmenides*, 247: 'though like the other it requires a certain proportion of the opposite.'

[44] It will be recalled that, on the reading I propose here, these two lines correspond instead to the beginning of Theophrastus' report.

[45] H. Fränkel, *Wege und Formen*, 175. The meaning of the term is made clear by its use in relation to Empedocles' theory of the pores or 'passages' (sect. 15, p. 503. 24–9); cf. also sect. 32, p. 508. 19–20, and sect. 46, p. 512. 13. Reading these texts makes it easy to understand G. Stratton's hesitation with regard to its appearance in sect. 3: 'The context would perhaps seem to favour the first of these alternatives [viz. a due proportion of heat and cold, each to the other]; but the frequent use of συμμετρία by Theophrastus to indicate an appropriate relation between inner power and outer object supports the second' (*Theophrastus and the Greek Physiological Psychology before Aristotle* (London and New York, 1917), 157–8).

[46] Cf. *Tim.* 67 c 7.

[47] This point will be developed in the commentary on the treatise which I am preparing with H. Wismann.

[48] For 'adapted' cf. sect. 41, p. 511. 3 (exposition of Diogenes of Apollonia); sect. 46, p. 512. 18 (criticism of Diogenes of Apollonia). For 'tempered' cf. sect. 14, p. 503. 14 (criticism of Empedocles); sect. 58, p. 515. 23 (Democritus).

'adaptation' precisely what we expect, especially if we have adopted the punctuation suggested earlier? If in fact the phrase *βελτίω δὲ καὶ καθαρωτέραν τὴν διὰ τὸ θερμόν* does not presuppose the mixture, then *συμμετρία* cannot have the meaning 'proportion'. One element, taken in its singularity, cannot be 'tempered'. On the other hand, it can be 'adapted', namely, adapted to what is the object of its perception. The *καί*, in *οὐ μὴν ἀλλὰ καὶ ταύτην δεῖσθαί τινος συμμετρίας*, shows then that the superiority of the hot as hot does not exclude the dependence of perception upon a second criterion, that of adaptation to the thing perceived.[49]

I suggest therefore that Theophrastus distinguished two factors in Parmenides' theory of knowledge: the nature of the element which knows, and the adaptation to the object. In that case, Theophrastus' discussion of Parmenides would already adumbrate the pattern which structures his exposition of the theory of Empedocles, where the (Parmenidean) principle that 'the similar knows the similar' combines with the hypothesis of 'passages' or 'pores', a doubleness of explanation which Theophrastus criticizes in section 15: 'and, on his theory, the very principle of the similar too is completely set aside, as correspondence is enough by itself.'[50] Hence we shall not be surprised to find that a doxographical report of Aetius associated Parmenides with the series of those who maintained 'that particular sensations are produced according to the adaptation to the passages, *παρὰ τὰς συμμετρίας τῶν πόρων*, inasmuch as each of the appropriate sensibles is adapted to each of these sensations'.[51] By demonstrating that Parmenides had a theory of *συμμετρία* taken in this sense, the *Treatise on Sensations* is surely at the origin of this report, which makes of Parmenides the father of Empedocles, Anaxagoras, Democritus, Epicurus, and Heraclides Ponticus, and goes so far as implicitly to attribute to him just that kind of differentiated explanation of the various senses we know from Theophrastus was missing in him.

Where then did Theophrastus read in Parmenides about a theory of adaptation? To be sure, he could have found the evidence outside of

[49] Naturally what applies to the element considered in itself applies also to the mixtures. The mixtures have just as much need of a certain *συμμετρία* as does each of the elements.

[50] *ὅλως τε κατά γε ἐκεῖνον ἀφαιρεῖται καὶ τὸ ὅμοιον, ἀλλὰ ἡ συμμετρία μόνον ἱκανόν.*

[51] *Παρμενίδης Ἐμπεδοκλῆς Ἀναξαγόρας Δημόκριτος Ἐπίκουρος Ἡρακλείδης παρὰ τὰς συμμετρίας τῶν πόρων κατὰ μέρος αἰσθήσεις γίνεσθαι τοῦ οἰκείου τῶν αἰσθητῶν ἑκάστου ἑκάστῃ ἐναρμόττοντος* (4. 9. 6, p. 397. 1–6 Diels).

this fragment. For, as I have already said, this is the case for other bits of information which he reports.[52] But, by the same token, nothing prevents us from thinking that he extracted the notion of adaptation from the lines he quotes. This hypothesis is rendered all the more plausible by the fact that the quotation is attached directly to the clause which deals with *συμμετρία* and which is isolated, if my punctuation is adopted, from the mention of the hot.[53] Now the notion of 'full' could well support a reconstruction of Parmenides' theory in terms of adaptation. For 'to adapt' is, according to a pattern quite well attested in Theophrastus' treatise, to fill up an (empty) space. The traces of the mechanism and of the vocabulary of 'filling up' are particularly clear in the exposition of the theory of Empedocles. If the 'passages' must be neither too large nor too narrow, this is so that the emanations can penetrate through them and maintain contact with the walls, that is, fill exactly the space between them.[54] Animals rich in fire perceive better at night, when that portion of obscurity which they lack during the day is restored to them and they are so 'filled'.[55] Finally, a report of Aetius devoted to pleasure—which, in virtue of the systematic association in the Presocratics between the theory of pleasure and sensation, figures in a chapter entitled 'Are the Sensations True?'—informs us that pleasure results from a 'filling up' of the similar by the similar.[56] It is easy to see why, since each of the elements—whether the two elements of Parmenides or the four roots of Empedocles—separated from itself in mixtures, recovers its integrity in the act of knowledge.

If I am right, Theophrastus constructed Parmenides' theory of sensation as an anticipation of Empedocles'. To be sure, it is impossible to reduce 'the full' in Parmenides to the physiological aspect of a theory of adaptation, which is all that interests

[52] Cf. p. 5.

[53] In other words, the remark on the superiority of the hot, which itself corresponds to nothing in the fragment, functions within Theophrastus' summary as a parenthesis; this superiority is a special case of otherness (*ἄλλην*). By the intermediary of the adverbial *καί* (*οὐ μὴν ἀλλὰ καὶ ταύτην*) Theophrastus returns to the general case which the fragment is illustrating.

[54] *... καί φησι τῷ ἐναρμόττειν εἰς τοὺς πόρους τοὺς ἑκάστης αἰσθάνεσθαι· διὸ καὶ οὐ δύνασθαι τὰ ἀλλήλων κρίνειν, ὅτι τῶν μὲν εὐρύτεροι [πρὸς], τῶν δὲ στενώτεροι τυγχάνουσιν οἱ πόροι πρὸς τὸ αἰσθητόν, ὡς τὰ μὲν οὐχ ἁπτόμενα διευτονεῖν, τὰ δ' ὅλως εἰσελθεῖν οὐ δύνασθαι ...* (sect. 7).

[55] *ἐπαναπληροῦσθαι γὰρ καὶ τούτοις τὸ ἐνδεές* (sect. 8).

[56] *τὰς ἡδονὰς γίνεσθαι ... κατὰ ... τὸ ἐλλεῖπον πρὸς τὴν ἀναπλήρωσιν* (4. 9. 15, p. 398. 10–12 Diels).

Theophrastus within the framework of a treatise devoted to sensory perception. On the other hand, the anticipation was a sketchy one, for neither was the principle of compensation developed in Parmenides' poem as it was in Empedocles, nor, as we well know from Theophrastus himself, did Parmenides talk about the particular sensations. In any case, Theophrastus probably did not misunderstand the meaning of τὸ πλέον. He understood, as we should, that 'the full' is thought. As for 'the more', he recognized in it a principle of variation which provided an explanation for the changing thought of men, a more universal and a better one than Homer's Zeus.

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THE PRIORITY OF DEFINITION AND THE SOCRATIC ELENCHUS

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1. Introduction

SOCRATES[1] has frequently been ascribed something like the following principle (known as 'the priority of definition principle'):

(PD) If A fails to know what F-ness is, then A fails to know anything about F-ness.[2]

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1 'Socrates' in this essay refers to the main character in Plato's early dialogues: (in alphabetical order) *Ap.*, *Chrm.*, *Crito*, *Euthph.*, *Gorg.*, *H. Mi.*, *Ion*, *La.*, *Prot.*, and *Rep.* 1. (Concerning *Euthd.*, *H. Ma.*, *Lys.*, and *Meno* see pp. 24–6 and nn. 10–14 below.) While I am inclined to believe that the 'Socrates' of these dialogues is the historical Socrates, none of the subsequent argument depends on this.

2 The literature concerned with this principle is extensive; see e.g. P. T. Geach, 'Plato's *Euthyphro*: An Analysis and Commentary', *Monist* (1966), 369–82; G. Santas, 'The Socratic Fallacy', *Journal of the History of Philosophy* (1972), 124–41; J. Beversluis, 'Socratic Definition', *American Philosophical Quarterly* (1974), 331–6; A. Nehamas, 'Confusing Universals and Particulars in Plato's Early Dialogues', *Review of Metaphysics* (1975), 287–306; M. F. Burnyeat, 'Examples in Epistemology: Socrates, Theaetetus, and G. E. Moore', *Philosophy* (1977), 381–98; T. Irwin, *Plato's Moral Theory* (Oxford, 1977); P. Woodruff, *Plato:* Hippias Major (Indianapolis, 1982); and more recently T. Brickhouse and N. D. Smith, 'The Paradox of Socratic Ignorance in the *Apology*', *History of Philosophy Quarterly* (1984), 125–31; G. Vlastos, 'Socrates' Disavowal of Knowledge', *Philosophical Quarterly* (1985), 1–31; A. Nehamas, 'Socratic Intellectualism', *Proceedings of the Boston Area Colloquium in Ancient Philosophy*, 2 (1987), 275–316; J. Beversluis, 'Does Socrates Commit the Socratic Fallacy?', *American Philosophical Quarterly* (1987), 211–23; J. Lesher, 'Socrates' Disavowal of Knowledge', *Journal of the History of Philosophy* (1987), 275–88; P. Woodruff, 'Expert Knowledge in the *Apology* and *Laches*: What a General

On this view, Socrates cannot know that virtue is teachable, if he fails to know what virtue is, nor can Euthyphro know that prosecuting his father for murder is holy, if he fails to know what holiness is.[3] In fact, it

Needs to Know', *Proceedings of the Boston Area Colloquium in Ancient Philosophy*, 3 (forthcoming); and M. L. McPherran, 'Commentary on Woodruff', ibid. It has helped clarify a number of confusions.

First, (PD) is the conjunction of two independent principles:

(P) If A fails to know what F-ness is, then A fails to know, for any x, that x is F;
(Q) If A fails to know what F-ness is, then A fails to know, for any G, that F-ness is G.

(See Nehamas, 'Socratic Intellectualism', 277–9, Vlastos's (A) and (A*), 'Socrates' Disavowal of Knowledge', 26 n. 65, and Beversluis' (A1) and (A2), 'Does Socrates Commit the Socratic Fallacy?', 211–12.) Thus, my 'A fails to know anything about F-ness' should be taken as shorthand for 'A fails to know, for any x, that x is F and, for any G, that F-ness is G' (*pace* Lesher, 'Socrates' Disavowal of Knowledge'). (In what follows I shall frequently assert that a passage provides evidence for or against (PD), when strictly speaking I should say (P) or (Q). The context should make clear which principle would be strictly appropriate. Little is to be gained by distinguishing between (P) and (Q) here. The evidence in the 'transitional' dialogues (see below) for (P), (T4), and (T5), and for (Q), (T1), and (T2), is equally compelling. The evidence in the elenctic dialogues is as well ((T13), (T14), and (T17) for (P) and (T15), (T16), (T18), and (T19) for (Q)). Perhaps most importantly, the alleged incompatibility with the Socratic elenchus holds as well for (P) as for (Q) (see n. 43 below). Anything lost in precision, then, is gained in ease of explication. I hope the reader will excuse my speaking loosely.)

Second, (PD) should not be confused with

(R) If A fails to know what F-ness is, then A fails to believe anything about F-ness.

(See Irwin, *Plato's Moral Theory*, and Santas, 'The Socratic Fallacy'.) Thus, Socrates can permit Euthyphro, for example, who is ignorant of what holiness is, to believe (and believe truly, for that matter) that his prosecution of his father is holy and that holiness is good and still be committed to (PD). If Socrates does not permit this, it cannot be simply because he holds (PD).

Finally, a necessary condition for A's knowing what F-ness is, according to Socrates, is A's being able to state correctly what F-ness is. This is what I call 'the verbalization requirement' (see n. 56 below). I leave open for present purposes what Socrates takes this ability to amount to (see Woodruff, *Hippias Major*, and R. Kraut *Socrates and the State* (Princeton, 1984)), except for three comments. (1) I take this ability to be equivalent to the ability to state the nature of F-ness, whatever that amounts to. (2) Socrates does not think that A needs to be able to do this immediately upon being asked the 'What is F-ness?' question (see *Prot.* 339 E and Burnyeat, 'Examples in Epistemology'). (3) Nor does Socrates think that A's ability to do this is sufficient for knowledge of what F-ness is. I am unaware of any direct evidence for this. Nevertheless, various interlocutors have been thought to give what Socrates takes to be correct answers to his question: Nicias (see G. Grote, *Plato and the Other Companies of Socrates* (London, 1875), vol. ii; P. Friedländer, *Plato*, ii. *The Dialogues: First Period* (London, 1964); T. Penner, 'The Unity of Virtue', *Philosophical Review* (1973), 35–68; Irwin, *Plato's Moral Theory*; H. Teloh, *The Development of Plato's Metaphysics* (University Park, Pa., 1981); id., *Socratic Education in Plato's Early Dialogues* (Notre Dame, 1986)), Laches (see C. S. Gould, 'Socratic Intellectualism and the Problem of Courage: An Interpretation of Plato's *Laches*', *History of Philosophy Quarterly* (1987), 265–79), Critias (see W. T. Schmid,

[*See opposite page for n. 2 cont. and n. 3*]

was so commonplace to attribute this principle to Socrates that Peter Geach, who in an influential essay found the principle to be both intellectually and morally disreputable, dubbed it 'the Socratic fallacy'. Recently, however, various scholars have begun to deny Socrates' commitment to this principle.

Among these scholars, John Beversluis has provided the most sustained attack against this ascription.[4] In doing so, he has helpfully elaborated a view sketched, but not developed, by Gregory Vlastos.[5] This view, which I shall call 'the Vlastos–Beversluis view' (or V–B for short), rests on two apparently independent theses, either one of which would probably suffice to debunk the tradition, but when taken together, provide strong grounds indeed for denying Socrates' commitment. The two theses are

'Socratic Moderation and Self-Knowledge', *Journal of the History of Philosophy* (1983), 339–48), and Polemarchus; and yet none can be thought by Socrates to know the nature of F-ness.

[3] Among those who have ascribed to Socrates either (P) or (Q) or (PD) are (in chronological order) W. D. Ross, *Plato's Theory of Ideas* (Oxford, 1951); R. Robinson, *Plato's Earlier Dialectic*, 2nd edn. (Oxford, 1953); I. M. Crombie, *An Examination of Plato's Doctrines* (London, 1962); Friedländer, *Plato*, vol. ii (1964); Geach, 'Plato's *Euthyphro*' (1966); N. Gulley, *The Philosophy of Socrates* (London, 1968); R. E. Allen, *Plato's* Euthyphro *and the Earlier Theory of Forms* (New York, 1970); H. F. Cherniss, 'The Philosophical Economy of the Theory of Ideas' (1970), repr. in G. Vlastos (ed.), *Plato: A Collection of Critical Essays*, i (Garden City, NY, 1972), 16–27; W. K. C. Guthrie, *A History of Greek Philosophy*, iii (Cambridge, 1971); Santas, 'The Socratic Fallacy' (1972); C. C. W. Taylor, *Plato:* Protagoras (Oxford, 1976); Irwin, *Plato's Moral Theory* (1977); Burnyeat, 'Examples in Epistemology' (1977); G. Santas, *Socrates* (London, 1979); T. Irwin (trans.), *Plato:* Gorgias (Clarendon Plato Series; Oxford, 1979); and Woodruff, *Hippias Major* (1982).

[4] Beversluis, 'Does Socrates Commit the Socratic Fallacy?' (henceforth, all references to Beversluis, unless otherwise noted, are to this 1987 essay). Besides Vlastos (see next n.), others who have objected to the tradition are Brickhouse and Smith, 'The Paradox of Socratic Ignorance', Lesher, 'Socrates' Disavowal of Knowledge', Nehamas, 'Socratic Intellectualism', and Woodruff, 'Expert Knowledge'. While I focus on V–B in this essay, it should not be thought that the argument lacks a more general significance. See esp. nn. 6, 7, 9, 17, 37, and 38 below. I focus on V–B because in a relatively short time it has gained considerable currency.

[5] Vlastos, 'Socrates' Disavowal of Knowledge'; cf. esp. pp. 23–6 and nn. 52–65 (henceforth, all references to Vlastos, unless otherwise noted, are to this 1985 essay). It should be noted that Prof. Vlastos has promised a fuller treatment of this issue. The remarks upon which I focus are admittedly preliminary, and there is no reason to suppose that he would accept *in toto* Beversluis's elaboration. (For some indication that he is at least partially satisfied with it see his forthcoming 'Elenchus and Mathematics: A Turning Point in Plato's Philosophical Development', n. 34.) I do not focus on the third section of Beversluis's essay (pp. 215–21) because I find myself in general agreement with it.

(I) 'There are no compelling textual reasons for ascribing [(PD)] to Socrates';[6]

(II) There are compelling textual reasons for not ascribing (PD) to Socrates.[7]

In the present essay I want to call into question both of these theses.

2. The first thesis

The argument for the first thesis depends upon two claims. First, while there are passages in the early dialogues which testify to (PD), these passages do not testify to Socratic views.[8] Second, those passages that do testify to Socratic views require the ascription only of less general and more plausible principles than (PD). I shall argue, first, that those passages that do testify to (PD) cannot be so easily dissociated from Socrates. Second, those more plausible principles that are ascribed to Socrates require explanation, an explanation that (PD) can provide. Third, competing explanations either fail to be sufficiently economical or rely on distinctions which may be un-Socratic and are surely without textual support. Thus, I shall conclude that while in the end I must agree that there is no single passage which

[6] Beversluis, 215. See also Brickhouse and Smith, 'The Paradox of Socratic Ignorance', 126, 'First, despite the number of commentators who attribute [(PD)] to Socrates, there is surprisingly little that can be found in the texts to support such a claim. Moreover, the passages that are cited in its support are also compatible with the weaker (and certainly less controversial) view that an understanding of virtue is necessary only for knowing *why* something is an instance of virtue'; and Lesher, 'Socrates' Disavowal of Knowledge', 285, 'The essentialist epistemic thesis, [(P)], is therefore stronger than any Platonic text can justify.' Woodruff, 'Expert Knowledge', says nothing directly concerning this first thesis, but he must be committed to it given his acceptance of the second thesis and his subsequent attempt to reinterpret (PD). Nehamas, 'Socratic Intellectualism', is the only one of these four to offer a sustained argument on behalf of this first thesis (pp. 278–91).

[7] See Brickhouse and Smith, 'The Paradox of Socratic Ignorance', 128, 'Socrates' philosophical method presupposes some access to pretheoretic confidence in judging individual cases'; Woodruff, 'Expert Knowledge', 22, 'This raises an acute difficulty for the Socratic approach. On the one hand, the elenchos proceeds with a view of exemplary acts of courage; on the other, it seems to presuppose that you cannot give a useful example of courage unless you have expert knowledge, as is implied by the priority of definition'; and Nehamas, 'Socratic Intellectualism', 292, 'But knowledge of the definition is not prior to knowledge of all features or instances of virtue. On the contrary, as the practice of the dialogues shows, the search for definition depends on presupposing such knowledge.' Lesher, 'Socrates' Disavowal of Knowledge', says nothing directly concerning the second thesis, but see pp. 280–1.

[8] Vlastos, 23 n. 54, 26 n. 65; Beversluis, 221 n. 4.

provides compelling textual evidence for ascribing (PD) to Socrates, the weight of the indirect evidence does provide rather compelling evidence for this ascription. (PD) provides a nice, economical explanation of the data. It is, I shall argue, the best explanation of the texts, *ceteris paribus.*

(*a*) *The transitional dialogues and* Republic *1*

Five passages from the transitional dialogues. Those passages that are conceded to require the ascription of (PD) to Socrates are

(T1) How do you know what sort of things are beautiful and ugly? Come now, can you say what the beautiful is? (*H. Ma.* 286 C 8–D 2)

(T2) He asks me if I am not ashamed to talk about beautiful practices, when I have clearly been refuted concerning the beautiful, to the effect that I do not know what the thing itself is. 'And yet,' he will say, 'how do you know whether someone has spoken beautifully or not, or done any other thing whatsoever, when you do not know the beautiful?' (*H. Ma.* 304 D 5–E 2)

(T3) We have been ridiculous . . . For the ones going away will say that we think that we are friends with each other and yet we have not been able to discover what a friend is. (*Lys.* 223 B 4–8)

(T4) I am so far from knowing whether virtue is teachable or not that I do not know at all what virtue itself is . . . Not knowing what a thing is, how would I know what sort of thing it is? Or do you think that it is possible for someone who does not know at all who Meno is to know whether he is beautiful or wealthy or well-born or the opposite of these? (*Meno*, 71 A 5–B 7)

(T5) We shall know clearly concerning this [that virtue comes to us by divine inspiration] when before we attempt to seek how virtue comes about in men, we attempt to seek what virtue is itself by itself. (*Meno*, 100 B 4–6)[9]

[9] These passages are not all on a par as V–B seems to suggest. (T3) provides rather weak evidence, while (T1) and (T2) provide rather strong evidence for (P), and (T4) and (T5) for (Q). Nevertheless, V–B does not dispute that together they establish Socrates' commitment to (PD), and so we can take this as common ground. It is perhaps with respect to these passages (and (T6)) that V–B's account differs most significantly from the accounts of the other four scholars who have recently denied such a commitment. The latter would deny that these passages establish such a commitment. Brickhouse and Smith, 'The Paradox of Socratic Ignorance', only cite (T4), but they make it clear that they take it to be compatible with their weaker version of (PD). A similar point can be made concerning Woodruff, 'Expert Knowledge': see his nn. 7, 23, 27. Lesher, 'Socrates' Disavowal of Knowledge', accepts (T4) and (T5) as evidence for Socrates' commitment to (Q), but denies that (T1) and (T2) require his commitment to (P). According to Lesher, when Socrates asks in these passages how he knows what things

But all of these passages occur in dialogues in which 'Socrates' is 'a thinker whose views are often radically at odds with those of his counterpart in the early dialogues' (Beversluis, 'Socratic Definition', 221 n. 4).

I cannot here undertake a full-scale critique of the distinction between 'elenctic' and 'transitional' dialogues presupposed here;[10] nor am I certain that I would want to if I could. I am in complete agreement with V–B that the transitional dialogues are among the latest of the early group. But, it does not follow from this that these dialogues do not provide any evidence for the views of the 'Socrates' of the elenctic dialogues. The point of calling them 'transitional' is precisely to suggest that, while they contain evidence of a new emerging Platonic view, they nevertheless continue to testify to the old Socratic one. Why, then, are (T1) through (T5) thought to provide evidence for the new emerging Platonic view, rather than the old Socratic one?

The answer is that (PD) is thought to be incompatible with views expressed in the elenctic dialogues, but not expressed in the transitional ones. In particular, it is claimed that (PD) is incompatible with Socrates' use of the elenchus. But, in the transitional dialogues, it is argued, the elenchus is no longer employed. Thus, it is conceded that the evidence of (T1) through (T5) does compel the ascription of (PD) to the 'Socrates' of the dialogues in which those passages are found. We can discount this evidence for ascribing (PD) to the 'Socrates' of the elenctic dialogues, though, because in those dialogues Socrates employs the elenchus. We can discount it, that is, because there is compelling evidence *against* ascribing (PD) to Socrates in those dialogues.[11] I shall be arguing in the second half of

are beautiful when he fails to know what the beautiful is, Socrates is assuming he does know what things are beautiful and wants to know how this is possible given his ignorance of what the beautiful is. This reading, however, seems forced and is required only because of Lesher's acceptance of the second thesis. Nehamas, 'Socratic Intellectualism', provides an ingenious and detailed argument against Socrates' commitment to (PD) in these passages. See nn. 17 and 38 below. Finally, the anonymous referee has suggested that (T3) does not provide evidence for (PD), but for

(S) For some substitution instances of F-ness, if A has F-ness, then A knows what F-ness is.

See n. 37 below.

[10] Vlastos, 'The Socratic Elenchus', *Oxford Studies in Ancient Philosophy* (1983), 27–58, and 'Elenchus and Mathematics'.

[11] It might be thought that it is enough if (PD) is 'naturally associated' with views expressed for the first time in the transitional dialogues. Thus, for example, Vlastos,

this paper that Socrates' use of the elenchus is not incompatible with his commitment to (PD). If this argument succeeds, it will not only raise serious questions for the second thesis, it will seriously undermine the first.

Furthermore, even if this argument does not succeed, there remains a difficulty for V–B. Their argument rests not only on the claim that there is this incompatibility between the elenchus and (PD), but also on the claim that in the transitional dialogues the elenchus is abandoned. It is because it is abandoned that the 'Socrates' of those dialogues can accept (PD). The justification for this view is 'the abandonment of adversary argument as Socrates' method of philosophical investigation' (Vlastos, 'The Socratic Elenchus', 57). According to Vlastos, the elenchus is adversative in the sense that Socrates' formal role is never to defend a thesis of his own but only to examine the thesis of his interlocutor ('Elenchus and Mathematics', 5). Vlastos recognizes that this is not to say that he does not examine Socratic theses in the elenctic dialogues. But, when he does, he always hands it over to the interlocutor as its proponent. I, however, am sure neither that this adversative method of philosophical investigation is always employed in the elenctic dialogues nor that it is completely abandoned in the transitional ones.[12]

The first third of the *Meno* (70 A–80 B) is as adversarial an examination as any to be found in the elenctic dialogues. Meno is the proponent of all of the answers to the 'What is virtue?' question, and they are not all easy to refute.[13] In the *Hippias Major*, while Hippias'

'Elenchus and Mathematics', has recently argued that an interest in advanced mathematics is attested for the first time in the transitional dialogues. In the context of axiomatic mathematics, however, (PD) might seem perfectly reasonable and appropriate, while outside this context it is inexplicable. The priority of definition in the artificial languages of axiomatic theories is a commonplace. (I owe this suggestion to an unpublished manuscript of Vlastos.) I do not believe, however, that this is enough to discount the evidence of (T1) through (T5). Without some sort of an incompatibility between these passages and the views of the elenctic dialogues, the passages that I shall be citing from the elenctic dialogues would be too fortuitous to deny any connection. The latter passages are general statements of which the earlier passages are at least logical consequents.

[12] See also Woodruff, 'Expert Knowledge', 4 n. 7.

[13] Vlastos, 'Elenchus and Mathematics', 7, appears to take the following conditions to be necessary for the adversative character of the elenchus: (1) the interlocutor is the proponent of the answers, and (2) the answers have some initial plausibility. *Meno*, 70 A–80 B, however, clearly satisfies both of these conditions. At one point Vlastos would have agreed: '[The "What is F-ness?" question] is pursued solely in the first third of the [*Meno*] which does not contain a single sentence uncharacteristic of the Socrates of the earlier dialogues' ('What Did Socrates Understand by his "What is F" Question?', in

first three answers may be 'simple-minded and easy to refute' (293 D 8), they are all propounded by Hippias himself. It is true that the next four answers are suggested by Socrates, but this fits a pattern well established in the elenctic dialogues: the second stage of the dialogue examines more sophisticated answers suggested by Socrates himself (cf. *Euthph.* 11 E) or by a second interlocutor when one is available (cf. *La.* 194 C and *Chrm.* 161 B).[14] Furthermore, the conversations with Hippocrates (*Prot.* 311 A–314 C), Melesias (*La.* 184 D–185 B), and Crito (*Crito*, 47 A–50 A) fail to display an adversative character.

Republic, *354 C 1–3*. There remains yet another passage which according to V–B compels the ascription of (PD) to Socrates.

(T6) When I do not know what the just is, I shall hardly know whether or not it happens to be virtue or whether or not the one having it is happy. (*Rep.* 354 C 1–3)

Again, however, it is claimed that it fails to be representative of the 'Socrates' of the elenctic dialogues. This time it is not because the first book of the *Republic* fails to be an elenctic dialogue, but because this passage is 'tacked on' to the end of the book. The argument for this is that

> it cannot belong to the composition which precedes it, for what it says (if I don't know what justice is, I cannot know if it is a virtue) implicitly contradicts [351 A 5–6], where 'no one could not know that injustice is ignorance' and so, by implication, no one could not know that justice is knowledge, and therefore (350 B 5) virtue. (Vlastos, 26 n. 65)

If there is any passage which can plausibly be considered to be a later addition, it is this one. If *Republic* 1 was indeed composed about the same time as the other early dialogues, then we should not be surprised that when Plato decided to use it as an introduction to his *magnum opus* it should require certain alterations to facilitate the transition to the new work. Nevertheless, we must not too easily resolve interpretational difficulties by distinguishing dates of composition for passages within the same dialogue. If this exegetical gambit is to be employed, we must have very strong evidence.

Platonic Studies (Princeton, 1976), 412). In fact, I suspect that he would still agree that the elenchus is employed in this portion of the dialogue, but this appears to raise difficulties for his account of *Meno*, 71 A 5–B 7.

[14] Woodruff, *Hippias Major*, 64 n. 113.

The evidence, however, is not as strong as might at first appear. First, the present ending matches nicely the endings of the other elenctic dialogues. Socrates invariably expresses dissatisfaction with the outcome of the discussion and urges the interlocutor to continue the search.[15] If the dialogue had ended before this passage, it would have ended on a much more positive note than any other early dialogue.[16] Second, I am not at all certain that we can take as seriously as Vlastos would like to the phrase 'no one can yet fail to know this (*touto*)'.[17] On the one hand, the *touto* may refer to the entire preceding clause, 'it will be easily shown that justice is stronger than injustice, since justice is wisdom and virtue, and injustice is ignorance'. If so, Socrates' claim that no one can still fail to know this is difficult to square with the fact that he immediately follows this by embarking on a new argument for the very proposition he has just claimed that no one can fail to know. On the other hand, if we read the *touto* as referring to the clause 'injustice is ignorance', as Vlastos would like, then the claim that no one could yet fail to know this is difficult to square with the fact that far from now knowing this, Thrasymachus does not even yet believe it:

(T7) If what you have just said is true—justice is wisdom—[the city will achieve power] with justice; but if what I have said is true, with injustice. (351 C 1–3)

[15] See *Euthph.* 15 E–16 A; *H. Mi* 376 B–C; *Gorg.* 526 D; *Prot.* 360 E–361 D; *La.* 210 A–B; *Chrm.* 175 D–176 A; also perhaps *Lys.* 223 B and *H. Ma.* 304 B–E; see also Adam's note on this passage (*Plato's* Republic (Cambridge, 1902)).

[16] Socrates' last assertion before the terminal paragraph of *Rep.* 1 is 'So, blessed Thrasymachus, injustice is never more profitable than justice' (354 A 8–9).

[17] Nehamas, 'Socratic Intellectualism', 290 n. 32, writes 'The "contradiction" [between 351 A 5–6 and 354 C 1–3] signifies not that the end of Book I has been added to the text with which Plato remains in agreement but that Plato is not satisfied with the arguments he has given so far.' I cannot see, however, how this speaks to Vlastos's point unless Nehamas too is unwilling to read the clause 'no one can still fail to know this' as seriously as Vlastos would like.

It is Nehamas's unwillingness to take (T6) as a later addition that raises the most serious objection to his more general account. Nehamas attempts to explain the passages we have been and shall be considering by ascribing the principle that knowledge of the nature of F-ness is necessary only to cases of knowing controversial examples and properties of F-ness (see (C) below). It is difficult, however, to see why the property of being a virtue should be a controversial property of justice. As a result Nehamas is forced to construe a controversial property or example as any property or example which is in fact disputed. This, however, will result either in every property's being controversial or one's state of knowledge depending upon with whom one is discoursing. The former results in collapsing (C) into (PD). The latter results in attributing to Socrates an epistemological theory reminiscent of some contemporary pragmatic theories, but not of anything remotely Socratic.

How, then, are we to understand Socrates' claim in (T6) that 'no one can yet fail to know this'? We should understand it as elliptical for the claim that 'no one can yet fail to know this, given what we have argued so far'. We should not, especially in the light of (T6), take Socrates' claim here to be made absolutely. Rather, we should take it to be made conditionally, just as he claims after his refutation of Charmides' first answer to his 'What is temperance?' question that

(T8) Temperance is not quietness, nor is the temperate life the quiet life, *at least according to this argument*, since being temperate ought to be the same as being fine. (*Chrm.* 160 B 7–9; emphasis added)

But there is nothing inconsistent between this conditional claim and (T6).

(*b*) *The elenctic dialogues*

Let us turn next to those passages that according to V–B are representative of Socrates, but only require principles more plausible than (PD).

Three passages from the Euthyphro. Invariably the first passage to be cited and examined in this context is

(T9) Then teach me what this form itself is, so that looking to it and using it as a paradigm, I can say that that which is such as it, whether done by you or anyone else, is holy and that which is not such as it is unholy. (6 E 3–6)[18]

V–B is quick to point out, however, that Socrates does not here assert that knowledge of the nature of holiness is necessary for knowledge that particular actions are holy. Rather, he claims that the former knowledge is sufficient for the latter knowledge.[19] This is a strong and, perhaps, implausible principle, that

(A) If A knows what F-ness is, then A knows, for any *x* that is F, that *x* is F,

[18] The importance of this passage is due in large measure to the influence of Robinson, *Plato's Earlier Dialectic* (p. 51). Geach, 'Plato's *Euthyphro*', chooses an even weaker passage on which to base this ascription, the passage immediately preceding (T9). (See also Ross, *Plato's Theory of Ideas*, 16, and N. P. White, *Plato on Knowledge and Reality* (Indianapolis, 1976), 16.) But Socrates does not object to Euthyphro's first definition on the grounds that the example appealed to cannot be known until what holiness is is known. Rather, he objects to it on the grounds that it is the wrong sort of answer. See *Euthph.* 7 A 2–4 and n. 57 below.

[19] See Santas, *Socrates*, 116–17, Vlastos, 23 n. 54, and Beversluis, 214.

but it is not as implausible as (PD).[20] It is (A), however, and not (PD), that this passage compels us to ascribe to Socrates.[21]

We should be careful, however, before we too readily dismiss (T9) as providing *any* evidence for (PD). To be sure, Socrates does not assert (PD) here, but what he does assert raises a difficult question: Why should he be so concerned to answer his 'What is holiness?' question, if there are other ways of determining which acts are holy?[22] If Socrates thought that there were other ways of determining whether Euthyphro's prosecution of his father was holy, why does he not pursue them, especially when neither he nor Euthyphro is found to have the knowledge which would have sufficed to make such a determination? What we need is an explanation of Socrates' interest in the 'What is holiness?' question in the *Euthyphro* and the 'What is F-ness?' question in general.[23] Ascribing (A) to Socrates underscores

[20] This comparative degree of plausibility may be unnecessary, but I believe that it is the purported implausibility of (PD) that has been a major motivation for those concerned to deny Socrates' commitment to it. Once this implausibility is recognized, we can no longer remain content with Robinson's 'vague impression' that Socrates is committed to (PD) (p. 51). I am sure neither of (PD)'s implausibility (it is (PD)'s conjunction with the verbalization requirement that leads to the implausibility) nor of (A)'s plausibility. (Note that (A) and its companion, even when understood as (A′) and (A1′) (see following n.), entail that if A knows what F-ness is, then A has no false beliefs about F-ness (see n. 73).) All of this is a hornets' nest into which we need not enter. It is sufficient that we are agreed that (T9) compels the ascription to Socrates of (A), not (PD).

[21] *Prot.* 360 E 8–361 A 3 may suggest this principle's companion (on the analogy of (P) and (Q); see n. 2 above):

(A1) If A knows what F-ness is, then A knows, for any G that F-ness is, that F-ness is G.

For other passages which may suggest one or the other of these principles see *Chrm.* 158 E 7–159 A 4 and *Meno*, 79 B–C. We may be able to eliminate *some* of the implausibility of these principles by understanding them as follows.

(A′) If A knows what F-ness is, then if A believes that x is F, then A knows that x is F.

(A1′) If A knows what F-ness is, then if A believes that F-ness is G, then A knows that F-ness is G.

Santas, 'The Socratic Fallacy', has suggested weakening the principle even further to something like

If A knows what F-ness is, then A 'may say' that x is F.

But this surely weakens the principle to the point of triviality. For presumably one's false belief concerning the nature of F-ness is sufficient for the ability or warrant *to say* that x is F.

[22] I owe this suggestion to Nicholas White.

[23] I do not mean to suggest that (PD) is the *only* possible explanation for Socrates' fascination. Prof. Vlastos, for example, has suggested that this concentration can be

the need for such an explanation. Ascribing (PD) to Socrates would provide one.

It is, perhaps, in order to provide such an explanation that Beversluis finds in this passage evidence 'that such definitional knowledge *alone* can provide him with the "standard" he needs in the situation at hand' (p. 214; emphasis added). The reason Socrates does not pursue any other method for determining whether Euthyphro's prosecution is holy is that his prosecution of his father is a 'controversial and borderline case'. Thus, according to Beversluis, Socrates holds

(B) If Euthyphro fails to know what holiness is, then Euthyphro fails to know that his prosecution of his father is holy,

on the basis of the more general principle

explained by the facts that (1) given (A), should Socrates ever succeed in answering his 'What is F-ness?' question it would have very significant consequences; and (2) despite the failure of his attempts to answer his 'What is F-ness?' question, these attempts have had huge success in establishing other truths. I am not persuaded, however, that the elenchus, whether employed in an attempt to answer the 'What is F-ness?' question or not, can establish the truth of any proposition, whether elenctically or otherwise (see H. H. Benson 'The Problem of the Elenchus Reconsidered', *Ancient Philosophy* (1987), 67–85). More importantly, I do not think that this explains the extent of Socrates' fascination with this question. There is no reason to think that there might not be other questions which are easier to answer, have equally or nearly equally significant consequences, and, in attempting to answer, establish other truths (e.g. 'What is the difference between virtue and vice?'). But Socrates is much less interested in these questions than in his 'What is F-ness?' question. Not that Socrates asks this question to the exclusion of all others. (See Beversluis, 222 n. 11.) But of the fourteen early dialogues the 'What is F-ness?' question plays a pervasive role in seven (*Chrm.*, *Euthph.*, *H. Ma.*, *La.*, *Lys.*, *Rep.* 1, and *Meno* (first third)) and sets the stage for two others (*Gorg.* 448 E–463 C and *Prot.* 312 C–313 C). This question is clearly important to Socrates. The question is 'Why?'

The anonymous referee has suggested another explanation: Socrates finds this question important, when F-ness is a moral property, because, as the *Apology* makes clear, he believes that possessing the virtues is of supreme value and the key to happiness. Again, I am not persuaded. First, it fails to explain Socrates' interest in the 'What is a sophist?' question in the *Protagoras* and the 'What is rhetoric?' question in the *Gorgias*. More importantly, Socrates believes the key to happiness is having a virtuous soul. But, why should an interest in having a virtuous soul require or suggest an interest in the question 'What are the virtues?' If Socrates holds (A), and not (PD), there will be ways of knowing that one has a virtuous soul other than knowing what virtue is, ways which may be more successful. Further, Socrates' interest is in having a virtuous soul, not necessarily in knowing that one has a virtuous soul. It might be thought that Socrates believes that in order to have a virtuous soul one must have knowledge of what virtue is (as opposed to knowledge of what goodness and badness is). I maintain, however, that the evidence for this doctrine is considerably more indirect than the evidence for (PD).

(C) If A fails to know what F-ness is, then A fails to know, for any x that is a controversial or borderline case, that x is F.[24]

(C) is of a piece with a number of principles suggested by various commentators, all of which rely on a distinction between two different sorts of cases of F-ness. The distinction is variously put in terms of controversial/uncontroversial cases, clear/unclear cases, or difficult/easy cases. In each case the relevant principle is weaker, and so more plausible than (PD). Unlike (PD), (C) would permit someone ignorant of the nature of F-ness knowledge that x is F, so long as x is an uncontroversial, clear, or easy case of F-ness. Further, such a principle would serve to explain why Socrates focuses on the method he does to determine whether the particular case at issue in the *Euthyphro* is a case of holiness. Euthyphro's rather extended description of the events leading up to the prosecution, as well as his report that his relatives are angry with him, seem to underscore the controversial nature of the particular case at issue: if Euthyphro's prosecution had been of a more ordinary variety (less controversial, clearer, or easier), Socrates would not have thought that knowledge of the nature of F-ness was required. It is only because Euthyphro is prosecuting *his father* for killing a *murderous slave* that Socrates thinks that knowledge that the prosecution is holy requires knowledge of the nature of F-ness.

Despite the general plausibility of these principles, and hence the obvious advantages of ascribing them rather than (PD) to Socrates, I am sceptical about the propriety of such an ascription to *Socrates*. My scepticism stems from two worries. First, I doubt that Socrates would have found the distinctions that these principles presuppose epistemologically relevant. They all rely on an appeal to common or ordinary opinion. Thus, for example, a controversial case of F-ness is a case concerning which there is general disagreement, many

[24] Beversluis, 214, 'Socrates needs to know the definition of Holiness in order to adjudicate the controversial and borderline case of Euthyphro's pending suit against his father, i.e. in order to know whether Euthyphro's action is holy.' See also Santas, 'The Socratic Fallacy', 136, and Nehamas, 'Socratic Intellectualism', 278. (C) can be conjoined with the following analogue to (Q):

(C1) If A fails to know what F-ness is, then A fails to know, for any G that is a controversial or borderline property, that F-ness is G,

to get an analogue to (PD):

(C2) If A fails to know what F-ness is, then A fails to know anything controversial about F-ness.

believing it to be a case of F-ness and many believing it not to be a case of F-ness. An unclear case of F-ness is a case concerning which no one or almost no one is able to form a belief one way or the other concerning its F-ness. And finally, a difficult case of F-ness is one concerning which everyone or nearly everyone falsely believes that it is not a case of F-ness.[25] In each case, then, the relevant principle testifies to a general confidence in common opinion. If common opinion had agreed with Euthyphro's prosecution of his father, Euthyphro would not need to know what holiness is in order to know that his prosecution was holy. But Socrates' distrust of common opinion is well attested.

Consider, for example, the following passages. In the *Crito*, after appealing to the example of the athlete who should heed the opinion of the one who knows, Socrates says

(T10) Similarly in the case of other things . . . but especially concerning just things and unjust things, ugly things and fine things, and good things and bad things . . . ought one to follow and fear the opinion of the many or of the one, if there is one who knows, whom it is necessary to be ashamed before and fear more than all the others? (47C 8–D 3)

Again, in the *Laches*, after being asked by Melesias to register his vote in order to decide between the incompatible advice offered by Laches and Nicias, Socrates says

(T11) I think that if one is to decide well one ought to decide by knowledge, not by number. (184E 8–9)

Finally, in the *Gorgias* Socrates distinguishes between his elenchus and Polus' as follows:

(T12) So don't tell me now either to put the question to a vote, to these people present; but if you've no better refutation than these, then do what I was saying just now—give me my turn, and face examination as I think it should be. For I know how to produce just one witness to whatever I say—the man I am having a discussion with whoever he may be—but I forget about the many. I know how to put the question to a vote to one man, but I don't even have a dialogue with the many. (474A 2–B 1, trans. Irwin)

In all these passages the suggestion is the same: what the many believe about a particular issue is of no importance to Socrates. They are no

[25] I owe the difficult/easy distinction to the anonymous referee.

more likely to be right than any other individual, except of course the one who knows. How, then, can Socrates think that the necessity to know what F-ness is in order to know that *x* is F is eliminated simply because the many believe it to be F?[26]

My second worry concerning attributing principles of this sort to Socrates can be put much more briefly. I doubt that there is any textual evidence for the distinctions which these principles presuppose. The best one can do in this respect is cite the present passage from the *Euthyphro*. But one will be hard pressed to find anything like an explicit distinction between controversial/uncontroversial, clear/unclear, or difficult/easy cases here. In fact, the only one of these three distinctions which can be even remotely thought to be suggested in the present passage is the difficult/easy distinction. It seems clear that nearly everyone believes that what Euthyphro is doing is unholy, for whatever Socrates thinks that is worth.[27]

Given, then, that the distinctions which principles like (C) presuppose are at most questionably Socratic and have no textual support, we cannot glibly ascribe them to Socrates. As a result, we should be hesitant to explain Socrates' commitment to (B) and his interest in the 'What is F-ness?' question by ascribing such principles to him.[28]

A second passage in the *Euthyphro* which requires our attention precedes (T9):

(T13) *Eu.* (i) [My relatives say] that it is unholy for a son to prosecute his father for murder—knowing poorly, Socrates, how the gods view the holy and the unholy (*to theion hōs echei tou hosiou te peri kai tou anosiou*).

So. (ii) Euthyphro, do you think that you have such accurate knowledge concerning divine affairs, and concerning holy things and unholy things (*peri tōn theiōn hopēi echei, kai tōn hosiōn te kai anosiōn*) that, the situation being as you say, you do not fear that by prosecuting your father you may be doing something unholy?

[26] For additional evidence for Socrates' distrust of common opinion see White, *Plato on Knowledge and Reality*, 3–4 and nn. 15–19.

[27] See White, *Plato on Knowledge and Reality*, 17, who suggests that an explicit recognition of such a distinction should be required before attributing such principles to Socrates. Whether or not this may seem too strong (White has suggested to me in conversation that he now thinks that it is), it should be noted that a lack of explicit textual evidence is not a fault of (PD) given (T1) through (T6).

[28] I do not take myself to have refuted explanations which rely on these distinctions with these brief remarks. My point has only been to suggest that what may seem to us to be the prima-facie plausibility of these principles may not to Socrates. An adequate response to these explanations, I believe, requires separate treatment.

> *Eu.* (iii) Socrates, I would be useless and no different from the average man, if I did not know accurately all such things (*ta toiauta panta*). . . .
>
> *So.* (iv) Tell me, then, what you just now asserted you knew clearly, what sorts of things you say the holy and the unholy are (*poion ti to eusebes phēs einai kai to asebes*) in the case of murder and all other actions. (4 D 9–5 D 1)

Notice the apparent ease with which Socrates goes from Euthyphro's claim that his relatives do not know the holy and the unholy (*tou hosiou . . . tou anosiou*) in (i) to thinking that Euthyphro then must know holy things and unholy things (*tōn hosiōn . . . tōn anosiōn*) in (ii) and back again in (iv) (*to eusebes . . . to asebes*). Whatever one wants to say about the move from (i) to (ii),[29] the move from (ii) to (iv) is noteworthy. The only place Euthyphro claims knowledge in this passage is at 5 A 1–2, (iii), but there he only asserts that he knows 'all such things' (*ta toiauta panta*), clearly referring back to the 'holy things' and 'unholy things' in (ii). At 5 C 9, (iv), however, without any comment,[30] Socrates claims that Euthyphro has asserted that he knows what the holy is and what the unholy is. Thus, Socrates appears committed here to the principle that the knowledge of holy things entails knowledge of what the holy is.

While V–B does not comment directly on this passage, it might be pointed out that this commitment does not compel us to ascribe (PD) to Socrates. His commitment here might, instead, result from the following principle:

> (D) If A fails to know what F-ness is, then A fails to know in general what things are F.[31]

[29] I have perhaps been too facile in describing the move from (i) to (ii). In the Greek the move is from failing to know *to theion hōs echei tou hosiou te peri kai tou anosiou* to knowing *peri tōn theiōn hopēi echei kai tōn hosiōn te kai anosiōn*, which, following J. Burnet, *Plato's* Euthyphro, Apology of Socrates, *and* Crito (Oxford 1924), 27–8, might be more accurately rendered as a move from failing to know 'the divine view concerning the holy and the unholy' to knowing 'the divine view concerning holy things and unholy things'. This, however, makes Socrates' move in (iv) even more surprising and suggests that he thinks that claiming to know the divine view of holy things and unholy things amounts to or entails knowing what the holy is. Why Socrates should think this if he is not committed to (PD) requires comment.

[30] Perhaps this is too strong. 5 D 1–5 might be thought to be Socrates' justification for this move. If so, it will be the justification for the relevant principle.

[31] See Nehamas, 'Socratic Intellectualism', 287, although not in this context. In fact, I am not aware of any scholar who has spoken to the transition in (T13).

The difference between (PD) and (D) is that, while (PD) does not allow that one who is ignorant of the nature of F-ness could know for some particular case that it is F, (D) does. It simply rules out that such a person might know in general which things are F. Once again, then, it appears that we can explain what Socrates says in the *Euthyphro* by ascribing to him a weaker, and so more plausible, principle than (PD).

Despite the availability of this weaker principle, (T13) requires something stronger. Socrates does not simply think that knowledge of the nature of holiness is necessary for Euthyphro to know in general which things are F; he also thinks that it is necessary for Euthyphro to be justified in acting in the way that he does. When Socrates asks Euthyphro if he knows so well which things are holy and which things are not that he is not afraid that by prosecuting his father he is doing something unholy, he is testifying to his view that

(1) In order for Euthyphro to be justified in acting as he does, he must know that his prosecution is holy.

And when Socrates takes Euthyphro's response in (iii) to his call for justification in (ii) to amount to the assertion that he knows what the holy is he is testifying to something like the following slightly modified version of (B):

(2) If Euthyphro knows that his prosecution is holy, then he knows what things are holy, and so what the holy is.

As a result Socrates thinks that Euthyphro's behaviour requires him to answer his 'What is holiness?' question.[32] (2), however, requires

[32] Santas, 'The Socratic Fallacy', has objected to this reading of the passage on the grounds that Euthyphro does not require any Socratic coaxing to profess his knowledge of the nature of holiness. He volunteers this profession 'on his own'. But to say this is not to say that Socrates does not think that Euthyphro's behaviour requires definitional knowledge. It is only to say that Euthyphro is anxious to profess it. In fact, just prior to this passage Socrates suggests that he does think this without any influence from Euthyphro's 'boasting'. Upon being told that Euthyphro is prosecuting his father for murder, Socrates exclaims, 'It is not known by many how this could be done correctly; for I think that not just anyone could do this, but only someone far advanced in wisdom' (4 A 11–B 2; see also *La.* 186 D 1–3). Thus, when Socrates asks Euthyphro if he knows so accurately concerning holy and unholy things that he is not afraid that his prosecution is unholy, he is testifying to the view that definitional knowledge is required to justify his behaviour. Further, it might be objected that by ascribing such a view to Socrates we thereby make some of his most significant actions unjustified on his own principles. Thus, for example, in the *Crito* Socrates appears willing not to escape on the basis that doing so would be unjust or vicious, and yet he does not think that he knows what the just or the virtuous is. I am unable in the present context to give a complete reply to this

explanation. (D), alone, is insufficient, and I have already registered my qualms concerning principles like (C).

The last passage in the *Euthyphro* that we need to examine comes near the conclusion of the dialogue.

> (T14) For if you did not know clearly the holy and the unholy, it is not possible that you would attempt to prosecute your aged father for murder on behalf of a hired labourer, but you would have feared the gods, risking that you did not do this correctly, and would have been ashamed before men; now, I know well that you think you know clearly the holy and the not holy. (15 D 4–E 1)

According to V–B this passage is a 'spinoff' of (T9). It testifies only to Socrates' commitment that definitional knowledge is sufficient, not necessary, for knowledge that something is F.[33] I find this difficult to understand. What Socrates says here is that he finds it impossible to believe that Euthyphro would have undertaken this prosecution if he did not know the nature of holiness. If, however, he believed that definitional knowledge was merely sufficient, not necessary, for Euthyphro's knowing that this particular prosecution was holy, he would have recognized that Euthyphro could know this without knowing what holiness is. But why, then, should Socrates find it so hard to believe that Euthyphro could be doing what he is doing without knowing what holiness is?[34] At a minimum, this passage again

objection. It involves issues concerning Socratic avowals and disavowals of knowledge, as well as issues concerning Socratic ethics and pragmatics, issues which I believe require separate treatment. Here I must rest content with pointing out that this objection is a problem for any interpretation which takes seriously Socrates' disavowals of knowledge, as I am inclined to do. It remains a problem for interpretations based on principles like (C), since Crito's introductory remarks clearly suggest that common opinion was lined up against Socrates' unwillingness to escape. Irwin's suggestion in *Plato's Moral Theory*, that Socrates only requires true belief in order to be justified in acting, in addition to its other difficulties (some of which are nicely outlined by Beversluis), flies in the face of (T14) considered below. If Socrates' disavowal of knowledge is denied in contexts like the *Crito* the objection has no force against the present interpretation.

[33] Vlastos writes concerning this passage: 'If Euthyphro *had* acted with knowledge of piety (which he foolishly thought he had: 4e, 15d–e), he and Socrates would know that this action was pious—which is not to say that this sufficient condition of pious action which Euthyphro had not met, is a necessary one' (p. 23 n. 54). Beversluis writes: '[Socrates] is again asserting only that definitional knowledge of F is a sufficient condition for knowing what things are F, not that it is a necessary condition' (p. 215).

[34] Perhaps Socrates is being ironic (not shamming: see n. 59). Surely, at this point in the dialogue Socrates does not think that Euthyphro knows the nature of holiness, and yet Euthyphro *is* prosecuting his father. How, then, can we take Socrates seriously when he says that he finds it impossible that Euthyphro could be acting as he is without

testifies to Socrates' commitment to (B), the epistemological priority of knowledge of the nature of holiness to knowledge that Euthyphro's prosecution is holy. Why Socrates should be committed to this, however, remains unexplained.

Two passages from the Laches. In the *Laches* too there is a passage which according to V–B has been mistakenly thought to require Socrates' commitment to (PD):

(T15) Then isn't this necessary for us to begin, to know what virtue is? For if we do not know at all what virtue happens to be, how would we know how it might best be obtained? (190 B 7–C 2)

According to Vlastos (T15) is not sufficiently general to ascribe (PD) to Socrates. Beversluis fills this out as follows:

Socrates does not put forth the completely general assertion that if you do not know the definition of F, you cannot know anything whatever about F or that anything whatever is an F. His claim is very specific and heavily qualified: if you do not know the nature of virtue, you cannot usefully advise anyone about how best to achieve it. (p. 215)

Once again, then, it appears that he is willing to ascribe to Socrates a principle on the basis of this passage, but again it is one that is weaker, and so more plausible than (PD):

(E) If A fails to know what virtue is, then A cannot advise how it might best be attained.

This principle is weaker than (PD) in two ways. It does not range over all substitution instances of F-ness, but only over the substitution instance 'virtue'. Nor is knowledge of the nature of virtue prior to knowing anything else about virtue; it is only prior to knowing how virtue might be best attained. This is indeed a weak principle and a far cry from (PD), but a closer look at the context of this passage will suggest that a stronger principle is required.

To see this we need to look only a few lines before (T15):

(T16) For if we happen to know concerning anything whatever that its being added to something makes that thing to which it is added

knowledge of what holiness is? But Socrates is not suggesting that Euthyphro requires definitional knowledge in order to *act*. That would be ludicrous indeed. Rather, he is claiming that Euthyphro requires definitional knowledge in order to be *justified* in acting (or, perhaps, justified in acting as he does). Thus, when we discover that Euthyphro fails to have this knowledge, we do not need to conclude that he is unable to prosecute his father. Instead, we should conclude that he is not justified in prosecuting his father. But surely this is one of the conclusions of the dialogue.

> better, and further, we are able to cause that thing to be added to it, then it is clear that we know that thing itself concerning which we advise how someone might best and most easily attain it . . . If we happen to know that sight added to the eyes makes them better, and further, we are able to cause it to be added to the eyes, then it is clear that we know what sight is concerning which we advise how someone might best attain it. For if we did not know what sight is or what hearing is, we would hardly be advisers or doctors worthy of attention concerning eyes and ears, how someone might best attain hearing and sight. (189 E 3–190 B 1)

First, Socrates is not merely committed to the view that knowledge of the nature of F-ness is necessary to give advice on how best to attain it only in the case of virtue. He is explicitly committed to it also in the cases of hearing and sight, and the suggestion of the first sentence is that he is committed to it in any case whatsoever. Second, the first two sentences require that definitional knowledge is not only prior to knowing how F-ness might best be attained, but also prior to knowing that having it makes a thing better and being able to cause the thing to have it. Thus, in addition to (E), modified to range over all values of F-ness, this passage also compels us to ascribe the following to Socrates:

(F) If A fails to know what F-ness is, then A fails to both know that having it makes x better and be able to add it to x.

Again, however, Socrates' commitment to (F) calls for an explanation. Ascribing (PD) to him would provide one.[35]

[35] It might be suggested that (T16), rather than supporting the ascription of (PD) to Socrates, argues against it on the following grounds: Socrates is suggesting that definitional knowledge is required *only* when one knows that having F-ness makes one better *and* one is able to make the addition, implying that it is not necessary when one knows that having F-ness makes one better but is unable to make the addition. (T16) does not have to be read this way, nor should it be read this way. The explanation for the conjunction of knowing that having F-ness makes one better and being able to make the addition is that according to Socrates both of these are necessary in order to be an adviser worthy of attention. Thus, he includes both conjuncts, not because definitional knowledge is necessary only in this case, but because it is only in this case that one is an able adviser. Understood in this way, however, (F) can be read literally as a conditional of the form 'if not p, then not (q and r)', or less literally as a conditional of the form 'if not p, then not q and not r'. I suspect that neither Plato nor ordinary conversation is likely to be sufficiently careful to provide a very precise answer to which reading is correct. If, however, the second reading is correct, then Socrates is committed to

(F*) If A fails to know what F-ness is, then A fails to know that having it makes x better.

(F*) is very similar to Socrates' claims at (T6), (T18), and (T19).

Charmides *176* A–B *1*. The last passage which V–B cites in this regard is the following assertion by Charmides:

(T17) I don't know if I have temperance or if I don't; for how would I know that concerning which neither of you is able to discover what it is, or so you say? (176 A 6–B 1)

According to Vlastos, this passage is not sufficiently general, while Beversluis says that this remark 'is nothing but a more emphatic reaffirmation of the philosophically and psychologically intimidated state of mind to which [Charmides] had already given vent at [158 D 1–6]'.[36] But can Beversluis be right? Is the Charmides who assumes that because *he* fails to understand what is meant by saying that temperance is doing one's own job, the one who taught him this does as well (162 B 9–11), or the Charmides who is about to resort to force to get Socrates to 'charm' him, 'philosophically and psychologically intimidated'? Further, are we to suppose that Charmides' answer at 158 D 1–6 is a sign of his philosophical and psychological intimidation? Far from it. His answer is philosophically sophisticated and psychologically bold. It is just the right sort of answer to give for someone who believes that he is temperate and that temperance is quietness or modesty.

Why, then, should we think that (T17) does not receive Socratic approval? Socrates does not anywhere object to it, and it is just the sort of thing we should expect him to approve of. At the beginning of the dialogue Charmides was rather confident about his own temperance, so much so that he knows exactly how to answer a question about his temperance. One might even think that he would be rather disrespectful, if he were not, in the light of Critias' praise at 157 D 1–8. (T17) suggests that by the end of the dialogue this conceit has been eroded.

But if (T17) does receive Socratic approval, is Vlastos right that it is not sufficiently general to ascribe (PD)? Yes and no. Certainly, he is right that, like (B) in the *Euthyphro*, all we are *compelled* to ascribe to Socrates is

(G) If Charmides fails to know what temperance is, then he fails to know that he is temperate.

(G) is more specific than (PD) in two ways: it is restricted to Charmides and it is restricted to temperance. But (G), like (B),

[36] I assume that '159d1–6' is an editorial error.

requires explanation. If Socrates is committed to (G), but not to (PD), then we should expect some account of what is distinctive about Charmides and/or temperance which explains the former commitment, but not the latter.[37] I do not see why Charmides should be a peculiarly controversial case, but in any case I have already raised questions about appealing to such a feature to explain his distinctiveness. As a result, while V–B is surely right that (T17) does not compel our ascription of (PD) to Socrates, it is highly suggestive of such an ascription.

The Gorgias *and* Protagoras. There remain only two passages to be considered before concluding our discussion of the first thesis. Unfortunately, neither passage is mentioned by V–B.

(T18) I will not answer him whether I think rhetoric is fine or mean, until I answer first what it is. For it would not be just, Polus. (*Gorg.* 463 C 3–6; cf. also 462 C 10–D 2)

(T19) I should be surprised if you knew what a sophist is. But if you don't know this, then you don't know whether the person to whom you are giving your soul is good or bad. (*Prot.* 312 C 1–4)

These passages clearly compel us to ascribe to Socrates the view that the questions 'What is rhetoric?' and 'What is a sophist?' are in some

[37] The anonymous referee has called my attention to an account according to which, for some values of F-ness, F-ness is 'self-revealing'. The suggestion is that in the case of temperance, friendship (*Lys.* 223B 4–8), and perhaps other virtues (*La.* 193D–E), Socrates believes that if A is temperate etc. then A knows what temperance is. It is this view that Socrates is testifying to at *Chrm.* 158E 7–159A 3. I do not find such an account satisfactory for the following reasons. First, the *Laches* suggests not that Laches and Socrates appear to lack courage because they are unable to say what courage is, but because they are failing to be courageous in their search for courage (194A 1–5). Second, *Chrm.* 158E 7–159A 3 claims not that if Charmides is temperate he knows what temperance is, but rather that if Charmides is temperate he has a belief about what temperance is. Whatever else one wants to say about this principle (see below), it is considerably weaker than the suggestion that temperance is self-revealing. Third, the conclusion Charmides reaches as a result of his (and Socrates' and Critias') ignorance of the nature of temperance does not fit well with the self-revealing principle. For Charmides does not conclude that he is not temperate, but that he does not know whether he is temperate or not. Finally, and I believe most importantly, the basis of the self-revealing nature of temperance is thought to be Socrates' intellectualist theory of virtue, according to which it might seem reasonable to think that the nature of temperance is included in the contents of the knowledge that temperance amounts to. But, it is difficult to see why *Charmides* should be so easily persuaded of the self-revealing nature of temperance according to such an account, and more importantly, the evidence for such an intellectualist theory is considerably more indirect than the evidence for (PD). Remember the evidence of (T1), (T2), (T4), and (T5) is straightforward, at least according to V–B. We have little reason to appeal to such hard-to-find doctrines as the self-revealing nature of temperance in order to explain (T17).

sense prior to the questions 'Is rhetoric fine or mean?' and 'Is a sophist good or bad?' But do they require us to ascribe (PD) to Socrates? Once again, our answer must be qualified. First, Socrates does not say in (T18) that the reason it would not be just to answer the second question before the first is that an answer to the second question could not be known prior to an answer to the first. But why should Socrates find it unjust to answer 'Is rhetoric fine or mean?' before answering 'What is rhetoric?', if it is not because he thought an answer to the latter question was epistemologically prior to an answer to the former? Further, the priority of the question 'What is a sophist?' to the question 'Is a sophist good or bad?' is explicitly epistemological in (T19). This certainly suggests that the priority Socrates has in mind in (T18) is epistemological as well. Second, Socrates does not say in either of these passages that the epistemological priority of the first questions to the second is generalizable to all questions of this sort. He only commits himself to this priority in the cases of rhetoric and a sophist and the properties fine and mean and good and bad. But again, what is distinctive about rhetoric, a sophist, and/or the properties fine and mean and good and bad that would explain why Socrates would restrict the priority in this way? The point is not that these questions cannot be answered. The point is that these questions require an answer. What Socrates says in (T18) and (T19) calls for explanation. Ascribing (PD) to him provides one. Withholding such an ascription without answering these questions leaves it unexplained.

(*c*) *Conclusion concerning the first thesis*

Before turning to the second thesis of V–B, let us summarize the results of our examination of the first. First, we saw that it depended essentially upon the following subtheses:

(Ia) Socrates' commitment to (PD) is incompatible with his use of the elenchus;

(Ib) Socrates does not employ the elenchus in the *Hippias Major*, *Lysis*, and *Meno*;

(Ic) (T6) is incompatible with Socrates' claim earlier in *Republic* I that 'no one can yet fail to know this'.

It is only if (Ia), (Ib), and (Ic) are true that the admittedly straightforward evidence of (T1)–(T6) can be discounted. I have raised some questions concerning (Ib) and (Ic), but in the second half of this paper

I shall argue that (Ia) is false: Even if the elenchus is no longer employed in the *Hippias Major*, *Lysis*, and *Meno*, it is not incompatible with (PD). As a result, we have no reason to discount the evidence of (T1)–(T5) as compelling our ascription of (PD) to Socrates, as opposed to the 'Socrates' of the transitional dialogues.

Secondly, we saw that we did have compelling evidence for ascribing to Socrates the epistemological priority of definitional knowledge to a number of things. In fact, we were compelled to ascribe to Socrates the following specific principles:

(B) If Euthyphro fails to know what holiness is, then he fails to know that his prosecution of his father is holy;
(E) If A fails to know what virtue is, then A cannot advise how virtue might best be attained;
(G) If Charmides fails to know what temperance is, then he fails to know that he is temperate;
(H) If A fails to know what rhetoric is, then A fails to know whether it is fine or mean;
(I) If A fails to know what a sophist is, then A fails to know whether a sophist is good or bad;

as well as the following more general principles:

(A) If A knows what F-ness is, then A knows, for any *x* that is F, that *x* is F;
(D) If A fails to know what F-ness is, then A fails to know in general what things are F;
(E*) If A fails to know what F-ness is, then A fails to know how it might best be attained;
(F) If A fails to know what F-ness is, then A fails to both know that having it makes *x* better and be able to add it to *x*.

Further, Beversluis, at least, seems to think that we are also compelled to ascribe the following principle to Socrates in order to explain his commitment to (B):

(C) If A fails to know what F-ness is, than A fails to know, for any *x* that is a controversial or borderline case, that *x* is F.

This, of course, may simply be the end of the story. Socrates simply holds (B)–(I) and there is nothing more to be said about it. The point I want to stress here is that this is at least prima facie an unsatisfactory interpretation. These diverse principles call for explanation. *Why* does

Socrates think that if one fails to know what F-ness is, then one fails to know how it might best be attained? *Why* does he think that if Charmides fails to know what temperance is, then he fails to know that he is temperate? *Why* does he think that one should not answer whether rhetoric is fine or mean until one has said what rhetoric is? Furthermore, why does he concentrate his time on searching out answers to his 'What is F-ness?' question, if he thinks this is only one of the ways one can know things about F-ness?

If Socrates is committed to (PD), all of these questions have the same answer. Principles (B)–(I) are all immediate consequences of (PD). There is, of course, no reason why these questions cannot have distinct answers, but it must be admitted that there is a certain economy in ascribing (PD) to Socrates.[38] Taken one at a time, the passages we have examined can be given distinct explanations. But when they are examined as a group the force of (PD) becomes more difficult to resist. Nor can it be objected that this inference to the best explanation has no textual support: the evidence of the *Hippias Major*, *Lysis*, *Meno*, and *Republic* I is straightforward, and if my argument in the second half of this paper succeeds, we shall have no reason not to appeal to this evidence. Ascribing (PD) to Socrates in order to explain what he says in the elenctic dialogues does not come out of the blue.

It must be admitted, however, that my argument against the first thesis depends heavily upon my argument against the second. Not only do I appeal to the evidence of the *Hippias Major*, *Lysis*, and *Meno* in support of (PD), but my argument against the first thesis is an inference to the best explanation. If (PD) is incompatible with Socratic views, it will not even be a good explanation, let alone the best

[38] I assume that economy is one of a number of perhaps incompatible desiderata of an adequate interpretation. It is a virtue of interpretations which appeal to principles like (C) that they too purport to be economical. In addition to my other worries about such principles, I am sceptical of whether they are sufficient to answer all of the questions raised. What, for example, is controversial, unclear, or difficult about Charmides' temperance, or that sight being added to the eyes makes them better? This is important because it might be thought that (C) is a better explanation, because more plausible, than (PD) of Socrates' commitment to the other principles. This is, I take it, the substance of Nehamas's interesting argument against ascribing (PD) to Socrates (in 'Socratic Intellectualism'). My reasons for not being persuaded by this argument result from my worries concerning attributing to Socrates an epistemologically relevant distinction between controversial and uncontroversial cases. See n. 28 above. Woodruff, 'Expert Knowledge', attempts to explain Socrates' commitment to the other principles by distinguishing between type-examples and two kinds of token-examples. His discussion is ingenious and perceptive, but I am sceptical whether such distinctions can find any textual support.

explanation, of Socrates' commitment to (B)–(I). It is for this reason, then, that we must now turn our attention to the second thesis.

3. The second thesis

According to V–B, we have compelling textual reasons for not ascribing (PD) to Socrates because such an ascription is incompatible with his use of the elenchus[39] in the elenctic dialogues.[40] Vlastos writes:

> how could Socrates have searched for definitions [by means of examples] if he accepted [(PD)]? How could he have sought to come to know what the F is by investigating examples of it, if he believed that when he did not know it he could not know if it is truly predicable of those examples, i.e., could not know if they are genuine F's or bogus ones? (p. 24)

The suggestion is that the elenchus proceeds by examining examples of F-ness so that Socrates and his interlocutors may acquire knowledge of what F-ness is.[41] Thus, for example, in the *Laches*, after

[39] The literature on the elenchus has exploded since Vlastos's influential 1983 papers ('The Socratic Elenchus' and 'Afterthoughts', *Oxford Studies in Ancient Philosophy* (1983), 71–4). A partial list (in chronological order) includes the following: C. H. Kahn, 'Drama and Dialectic in Plato's *Gorgias*', *Oxford Studies in Ancient Philosophy* (1983), 75–122; R. Kraut, 'Comments on Vlastos', ibid. 59–70; T. Brickhouse and N. D. Smith, 'Vlastos on the Elenchus', ibid. (1984), 185–96; M. Polansky, 'Professor Vlastos' Analysis of Socratic Elenchus', ibid. (1985), 247–60; C. H. Kahn, 'Plato's Methodology in the *Laches*', *Revue internationale de philosophie* (1986), 7–21; M. C. Stokes, *Plato's Socratic Conversations: Drama and Dialectic in Three Dialogues* (Baltimore, 1986); P. Woodruff, 'The Skeptical Side of Plato's Method', *Revue internationale de philosophie* (1986), 22–37; Teloh, *Socratic Education* (1986); Benson, 'Problem of the Elenchus' (1987); J. King, 'Elenchus, Self-Blame and the Socratic Paradox', *Review of Metaphysics* (1987), 105–26; K. Seeskin, *Dialogue and Discovery: A Study in Socratic Method* (New York, 1987); H. Teloh, 'The Importance of Interlocutors' Characters in Plato's Early Dialogues', *Proceedings of the Boston Area Colloquium in Ancient Philosophy*, 2 (1987), 25–38; H. H. Benson, 'A Note on Eristic and the Socratic Elenchus', *Journal of the History of Philosophy* (forthcoming); McPherran, 'Commentary on Woodruff'; Woodruff, 'Expert Knowledge'; and T. Brickhouse and N. D. Smith, 'Socrates' Elenctic Mission', forthcoming in *Oxford Studies in Ancient Philosophy*.

[40] A second incompatibility which V–B does not stress but which might be pointed to is between Socrates' commitment to (PD) and his simultaneous disavowal of knowledge of the natures of various F-nesses and his avowal of knowledge of examples and properties of those same F-nesses. (Both of them discuss the relevant passages, but not in connection with their argument against the ascription of (PD).) It would be inappropriate in the present paper to attempt to respond in detail to this alleged incompatibility as well. I do not, however, find the evidence for Socratic knowledge as widespread as does V–B (see also Lesher, 'Socrates' Disavowal of Knowledge', and Woodruff, 'Expert Knowledge'; D. Morrison, 'On Professor Vlastos' Xenophon', *Ancient Philosophy* (1987), n. 10, provides the start of a nice corrective to this view).

[41] It is natural to understand this as the method of generalization and abstraction; see e.g. F. M. Cornford, *Plato's Theory of Knowledge* (London, 1950), 185, W. K. C. Guthrie,

Socrates has given his famous list of courageous actions, he encourages Laches to

(T20) Try then to say first what this courage is which is the same in all these cases. (191 E 10–11)

And again, after Socrates has attempted to clarify his meaning by appeal to the example of quickness, he says:

(T21) Try to speak in a similar way concerning courage: what is this quality which is the same in pleasure and in pain and in all the things in which we said it was and which is called courage? (192 B 5–8)[42]

Further, Beversluis points to passages in which Socrates appears to appeal to properties of the F-ness being sought in the particular elenchus. Thus, for example, Socrates appeals to the premiss that temperance is fine in his elenchus with Charmides to come to know the nature of temperance.[43] The charge, then, is that (PD) is inconsistent with the elenchus, Socrates' method of acquiring knowledge of the nature of F-ness: it is inconsistent with acquiring such knowledge by examining examples and properties of F-ness.

The first thing to notice about the charge is that it presupposes the following *method* premiss:

(M) The elenchus (at least sometimes)[44] proceeds by examining examples and properties of F-ness so that Socrates and his

The Greek Philosophers (London, 1950), 77, and Beversluis, 'Socratic Definition', 334. It is far from clear to me, however, that this is how V–B understands it. As a result, I have deliberately left the details of this method vague.

[42] See also (T22), (T23), and (T24) below. Beversluis, 212–13, also cites *Chrm.* 159 C 3–160 B 5, but Socrates here encourages Charmides to look into himself (*eis seauton emblepsas*), not to '[investigate] a wider range of cases'. In any case, I cannot accept that Socrates believes that either he or Charmides knows that Charmides is temperate. Quite the contrary, Socrates doubts that he is.

[43] Beversluis also cites *Chrm.* 160 E 9, 160 E 11, 160 E 13, *La.* 192 C 5–7, 192 C 8–9, and 192 D 7–8 as violations of (Q). He cites the following other violations of both (P) and (Q): *Crito*, 54 D 4–6, *Gorg.* 464 B 2–4, 470 D 9–11, *La.* 191 D 1–E 2, 191 E 1–3, 191 E 4, 191 E 10–192 B 4, *Chrm.* 159 C 3–160 B 5, *Rep.* 331 E 5–9, and *Prot.* 329 E 6–333 B 4. In this respect, at least, Beversluis seems clearly right. The evidence against Socrates' commitment to (P) is as strong as that against his commitment to (Q). If Socrates needs to know premisses like 'The Spartans were courageous at Plataea' in order to achieve his elenctic aim, he will also need to know premisses like 'Temperance is fine'. It is for this reason that I have ignored the distinction between (P) and (Q) in the body of this paper. In the Socratic context, they stand or fall together.

[44] This qualification is necessary for two reasons. First, both Woodruff, 'Expert Knowledge', and Brickhouse and Smith, 'Socrates' Elenctic Mission', have usefully

interlocutors may acquire knowledge of the nature of F-ness.

In order to generate an inconsistency here, however, we need two additional premisses. First, we need to assume that in order to acquire knowledge of the nature of F-ness by such an examination of examples and properties, one must know that those examples and properties are examples and properties of F-ness. We can call this the *necessity-of-knowledge* premiss,

(NK) In order to acquire knowledge of the nature of F-ness by examining examples and properties of F-ness, one needs to know that those examples and properties are examples and properties of F-ness.

Thus, if Socrates is committed to (PD), he is committed to the position that if he or his interlocutors are to acquire knowledge of the nature of F-ness by examining examples and properties of F-ness, they need to know the nature of F-ness. But it might reasonably be supposed that acquisition of knowledge presupposes prior ignorance, so that Socrates' proposed method of inquiry would be undermined. It would presuppose the very knowledge it sought to acquire. Furthermore, the text appears to testify to their ignorance. Socrates frequently disavows any such knowledge (cf. e.g. *Gorg.* 506 A 3–4, 509 A 4–6; *Ap.* 21 B 2–5; and especially *Meno*, 71 A 6–7, B 2–C 4), while his interlocutors' ignorance is entailed by their inability to state in a reasonable length of time what the relevant F-ness is. We can call this the *ignorance* premiss,

(N) Socrates and his interlocutors do not know the nature of F-ness.

Thus, if Socrates holds (PD), he must be seen as practising a method which presupposes the very knowledge which the method itself as well as the text suggests is lacking. That is, if Socrates holds (PD), he must be seen as practising a method which cannot succeed. This is, of course, not a straightforward inconsistency, but it is clearly a confusion that we ought to hesitate to attribute to Socrates. We should need compelling evidence indeed before ascribing (PD) to Socrates,

objected to talking about *the* aim of the Socratic elenchus. Second, the *Ion* and the *Hippias Minor* suggest that this is not the only way that the elenchus can proceed. See also *La.* 189 D–E, *Gorg.* 514 B–515 C, and *Euthd.* 285 A–B.

in the light of such a confusion. It clearly undermines a best-explanation argument.

In an attempt to avoid this confusion without denying Socrates' commitment to (PD), some scholars have sought to reject the *ignorance* premiss;[45] others have sought to reject the *necessity-of-knowledge* premiss.[46] In this paper I want to focus on the *method* premiss, a premiss which I believe has not received sufficient attention. I shall argue that two versions of this premiss need to be distinguished and that doing so provides a resolution of this tension, short of abandoning Socrates' commitment to (PD).

(*a*) *A distinction*

The two versions of (M) that I have in mind depend upon distinguishing between what might be called remote aims of an action or method and immediate aims. Thus, for example, the immediate aim of my driving the car this morning was to get to Dale Hall, while its remote aim was to teach class. I did not drive my car this morning just to get to Dale Hall. My getting to Dale Hall was a necessary condition of my teaching class, and it was to accomplish this necessary condition that I drove the car. Thus, my driving the car this morning had both the immediate aim of getting to Dale Hall and the more remote aim of teaching class. If I had not needed to get to Dale Hall to teach class, I might not have needed to drive my car this morning to teach class. Further, if I had not needed to teach class this morning, I might still have needed to get to Dale Hall and so to have driven my car. The aims of my driving the car this morning are distinct, but they are importantly related.

Given this distinction between immediate and remote aims, the question arises whether the aim of acquiring knowledge of the nature of F-ness that (M) attributes to the Socratic elenchus is an immediate

[45] Gulley, *Philosophy of Socrates*, L. Versenyi, *Socratic Humanism* (Yale, 1963), id., *Holiness and Justice: An Interpretation of Plato's* Euthyphro (Washington, DC, 1982), and Teloh, *Development of Plato's Metaphysics* and *Socratic Education.* They have not to my knowledge offered this position, however, explicitly as a reply to the allegation I am discussing. My point here is that it is a popular manœuvre which might be seen as a way of avoiding our difficulty.

[46] Irwin, *Plato's Moral Theory*, Santas, *Socrates*, Woodruff, *Hippias Major*, and perhaps Burnyeat, 'Examples in Epistemology'. (Woodruff, 'Expert Knowledge', has recently abandoned this view.) Vlastos has appropriately described this view as 'now widely regarded as the right solution to the puzzle' (p. 23 n. 52). (See also Nehamas, 'Socratic Intellectualism', 281.)

or remote aim. I argue that the immediate aim of the Socratic elenchus is the testing of the interlocutor's knowledge. The elenchus is ultimately concerned with the acquisition of knowledge of the nature of F-ness, but this is not its immediate aim. Next, I argue that knowledge that certain examples and properties are examples and properties of F-ness is not necessary to achieve the elenchus' immediate aim. (At least it is not necessary to achieve what Socrates succeeds in achieving in the early dialogues.) Finally, I shall argue that whether or not such knowledge is necessary to achieve the elenchus' ultimate aim, we have little[47] reason to think that *Socrates* would have found such knowledge necessary. It is one thing to argue that Socrates' method cannot achieve its aim, and quite another to argue that it cannot achieve its aim on Socrates' own assumptions. I suspect that the former charge may have some justification, but I argue that the latter charge does not.

(*b*) *The immediate aim of the elenchus*

The Laches, Euthyphro, Hippias Major, *and* Meno. Let us turn first to those passages which provide the best evidence for (M). In addition to (T20) and (T21) there are

(T22) Remember then that I did not bid you to teach me one or two of the many holy things, but that form itself by which all the holy things are holy; for you said that it is by one form that the unholy things are unholy and the holy things holy. (*Euthph.* 6 D 6–E 1)

(T23) Come now, Socrates, answer me. All those things that you say are beautiful will be beautiful, if the beautiful itself is what? (*H. Ma.* 288 A 8–9)

(T24) Since then the virtue of all of these is the same, try to say and remember what Gorgias and you with him say that this same thing is. (*Meno*, 73 C 6–8)[48]

Notice that the interlocutors in these dialogues all profess to know the nature of F-ness prior to these passages. Euthyphro claims that he would be of no use and no different from the many if he did not know

[47] I say 'little reason', not 'no reason'. One reason for thinking that Socrates would have found such knowledge necessary is that *it is*. I suggest below why I believe that such a principle of charity is too strong in this case; see n. 87.

[48] Notice that (T23) and (T24) are from dialogues in which Socrates is committed to (PD) according to V–B. Thus, the mere occurrence of passages like (T20)–(T24) does not rule out Socrates' commitment to (PD).

accurately piety and impiety at 4 E 1–5 A 2.[49] Hippias says that his knowledge of the beautiful itself is a small thing and not very important at 286 D 7–E 6. Meno claims, like Gorgias, to know what virtue is at 71 B 9–D 8,[50] and, finally, Laches claims to know what virtue is and so, since courage is a part of virtue, what courage is at 190 B 7–D 8.[51] This suggests that the immediate aim of Socrates' subsequent encouragement in (T20)–(T24) cannot be that the interlocutors acquire knowledge of the nature of F-ness. They think they already have this knowledge. It is clear that the interlocutors do not take this to be the aim of Socrates' encouragement. If they did, they would have simply responded that they did not need to examine the F-things. They already knew the nature of F-ness. If Socrates thinks that they fail to have the knowledge they profess and so ultimately seeks to help them acquire this knowledge, he must first disabuse them of their false conceit that they already have it.

But perhaps this is too quick. Between Laches' claim to know what courage is at 190 B 7–D 8 and Socrates' encouragement to look at examples of courage at 191 E 10–11, Laches' first attempt to answer the 'What is courage?' question has been refuted. The same pattern occurs in the *Euthyphro* and *Meno*.[52] This suggests that the refutation has served to disabuse Laches of his former conceit. In fact, Laches has already acquired some knowledge that he did not formerly have by means of this method: he has come to know that there are other examples of courage, examples which his first answer failed to cover.

[49] Actually, Euthyphro only avows knowledge of 'how it holds concerning divine things and concerning holy and unholy things' (E 5–6), but Socrates takes this to be an avowal of knowledge of 'what sort of thing the holy and the unholy is' at 5 C 9–D 1. This leads him to ask Euthyphro to 'say what the holy is and what the unholy is' (5 D 7). Thus, Socrates takes Euthyphro at 4 E 9–5 A 2 to be avowing knowledge of what holiness and unholiness is. See pp. 33–4 above.

[50] Meno's avowal of knowledge of what virtue is is not explicit, but that Socrates takes him to be avowing such knowledge is clear. At 71 C 3–4 Socrates claims to have never met anyone who knows what virtue is. Meno is surprised that Socrates does not think that Gorgias does, and admits that virtue seems to him the way it does to Gorgias (C 5–D 3). Socrates then asks Meno to say what virtue is in order that he may be shown to have spoken falsely in claiming never to have met someone who knows what virtue is (D 6–8; see also 79 E 7–80 D 4).

[51] Once again, Laches' avowal of knowledge of what courage is is not explicit. His avowal of what virtue is, however, is. The fact that both he and Socrates take the examination of his knowledge of virtue to be more easily accomplished by considering what he says courage is than by considering what he says virtue is suggests that they both take his explicit avowal to imply his knowledge of what courage is.

[52] It does not occur in the *H. Ma.*, however. The fact that it does not should suffice to show that the intermediate refutation is not necessary.

It is in the light of Laches' new-found knowledge that Socrates encourages him to look at these cases which he now recognizes to be examples of courage, to come to know what courage is.

This, however, is not what takes place in these passages. Consider, first, the *Laches*. After Nicias and Laches have offered incompatible advice, Socrates suggests that they examine which of them is an expert (*technikos*) in the subject at hand.

(T25) Now, then, too it is necessary first to examine this very thing, whether or not one of us is an expert (*technikos*) concerning that on which we seek advice; and if one of us is, it is necessary to be persuaded by him, though being one; if not, then it is necessary to seek someone else. (184E 10–185A 3)[53]

Socrates disavows such expertise, and Nicias and Laches agree to be examined. This is followed by

(T26) It might not be a bad idea to examine ourselves concerning these things which we just now tried to discover: what teachers of such an education we have had and what other ones we have made better;[54] but I think that the following inquiry will lead to the same point and may be more nearly from the beginning. (189D 5–E 3)

This new inquiry concerns which of them has knowledge of the nature of virtue.[55] Laches now avows his knowledge of virtue and by implica-

[53] See also 185B 1–2, 185B 9–C 10, and 185E 4–6. To claim that Socrates is concerned here to examine whether Laches and Nicias are experts in the subject at hand is not to deny that Socrates is concerned to answer the original question concerning whether the sons of Lysimachus and Melesias ought to be trained in the art of fighting in armour. Rather, it is simply to claim that in the *Laches* at least, as (T25) suggests, Socrates attempts to answer the original question by finding such an expert.

[54] These questions are explicitly connected to the inquiry concerning expertise in (T25) at 185E 4–6 and 185E 9–186A 1.

[55] That this is the new inquiry, not simply 'What is the nature of courage?', is supported by the following considerations. First, Socrates says 'We should not examine concerning the whole of virtue straight away, but concerning some part of it we should see first whether we know it sufficiently' (190C 8–D 1). Second, the point to which the new inquiry will lead is supposed to be the same as the point to which the inquiries concerning Laches' and Nicias' teachers and whom they have made better would have led. But the point of these inquiries is more naturally associated with their expertise (see previous note), and so their knowledge of what courage is. It is true that I have just admitted in n. 53 that the point of the inquiries explicitly associated with expertise nevertheless remains associated with the original inquiry concerning the education of the sons of Lysimachus and Melesias. It might therefore be thought that the point of the more-nearly-from-the-beginning clause is to suggest that the new inquiry will be more directly related to the original one than the inquiry which goes through expertise. But, and this is a third consideration, the argument for the claim that the new inquiry will lead to the same point relies on the notion of expertise. That is, Socrates' argument

tion courage, and, after agreeing that since he knows what courage is he should be able to state it,[56] makes his first attempt at answering the 'What is courage?' question. Socrates criticizes this answer, but not on the grounds that Laches has given the wrong answer to the right question. Rather, he claims that he has misunderstood the question: he has attempted to answer a question which Socrates did not mean to ask (190 E 8–9).[57] Socrates thinks that he has misunderstood his question because Laches is well aware of examples of courage which his answer does not even purport to cover (190 E 10–191 C 6). It is because Laches has failed to understand his question that Socrates at this point attempts to explain it (192 A 1–B 3): he was not asking for the thing that is the same in one or two of the cases that Laches recognizes to be examples of courage; he was asking for the thing that is the same in all of the cases that Laches recognizes to be examples of courage. It is after this explanation that Socrates encourages Laches to say what courage is, looking at all those examples he recognizes to be courageous (192 B 5–8).

Seen in context, then, Socrates is not encouraging Laches to look at examples of courage in order to acquire the knowledge of what it is. Laches already thinks he has it and nothing yet suggests that he does not. Instead, Socrates is encouraging Laches to do this in order to answer the question that his purported knowledge entails that he should be able to answer. Further, Socrates encourages Laches to do this in order to determine whether he has the knowledge he thinks he has, and so whether he is an expert in the proper education of youth.

from 189E 3 to 190B 7 is that someone whose advice is worth listening to concerning the care of something, e.g. a doctor, must have a certain sort of knowledge, viz. knowledge of what the thing is that will make the thing better. This, however, is just to reiterate Socrates' interest in whose advice ought to be listened to, which we saw at 185A–E amounted to who was an expert in the subject at hand. Fourth, Nicias certainly assumes that the subsequent discussion will be an examination of the interlocutors (187E–188C), which fits nicely with the suggestion that Socrates is concerned to determine whether or not they have knowledge and so are experts. Finally, the point of the long section from 184D–189D is to underscore the importance of discovering the one who knows, a point which is repeated in Socrates' parting advice: 200E 1–201A 7. It is difficult to believe that Socrates simply abandons this inquiry at 189D. (T26) suggests instead that he is simply abandoning one method of pursuing this inquiry for another.

[56] The verbalization requirement (190 C 6).

[57] The distinction between a formally incorrect answer and a materially incorrect answer is perhaps difficult to draw, but it does appear to be the distinction that Socrates is attempting to draw (see *Euthph.* 7 A 2–4 and Nehamas, 'Confusing Universals and Particulars'). Benson, 'Misunderstanding the "What is F-ness?" Question', *Archiv für Geschichte der Philosophie* (forthcoming), attempts to provide an analysis of Socrates' 'What is F-ness?' question which makes this distinction philosophically respectable.

Socrates, that is, encourages Laches to look at various actions that he recognizes as courageous in order to answer the 'What is courage?' question so that Laches' knowledge can be tested.

This is also the point of Socrates' encouragement at (T24). Socrates asks Meno to answer the question 'What is virtue?'

(T27) so that I have spoken a very unfortunate falsehood, in claiming never to have met anyone who knows [what virtue is], when you and Gorgias are shown to know. (71 D 5–8)

He is asking this, then, in order to determine whether Meno does, in fact, have the knowledge he thinks he has. Meno follows this with his first attempt to answer the 'What is virtue?' question. Again, Socrates objects to this on the grounds that he has failed to understand the question asked.[58] Again, he explains what he meant to be asking and offers the encouragement of (T24). Once again Meno's knowledge has not yet been tested. Thus, Socrates encourages him to look at all those things he recognizes as examples of virtue so that it can be.

In the *Euthyphro* and *Hippias Major* the situation appears different. The suggestion that Socrates is asking Euthyphro what piety is and Hippias what beauty is so that he may determine whether they in fact know what they think they know is far from apparent. What he says is that he asks these questions so that he may learn from them what they claim to know (*Euthph.* 5 C 4–D 5 and *H. Ma.* 286 D 3–E 4). In both of these dialogues, then, the immediate aim of the elenchus does appear to be the acquisition of the knowledge of the nature of F-ness: Socrates is concerned to acquire what Euthyphro and Hippias claim to have (knowledge of the nature of piety and beauty, respectively).

This, however, is to miss a clear case of Socratic *eironeia*.[59] It is to take seriously Socrates' acceptance of Euthyphro's and Hippias' knowledge based solely on their claims or reputations. It is precisely because they have this knowledge that Socrates seeks to become their

[58] *Meno*, 72 A 6–73 C 5. That this is Socrates' objection is not as explicit as in the *Laches*; see, however, 72 C 6–D 7. Just as in the *Laches*, however, it is in this passage that Socrates gives other examples of the sort of question he is asking.

[59] I use *eironeia* here in the light of G. Vlastos, 'Socratic Irony', *Classical Quarterly* (1987), 79–96. Socrates is not being ironic here; he does not intend that Euthyphro and Hippias recognize that he does not really want to become their pupil. Rather, his intention is to deceive them in order to facilitate his questioning. Cf. Nehamas, 'Socratic Intellectualism', 303–4, who appears to take the *Euthph.* passage similarly. T. Brickhouse and M. D. Smith, 'Irony, Arrogance, and Sincerity in Plato's *Apology*', in E. Kelly (ed.), *New Essays on Socrates* (Lanham, Md., 1984), 29–46, at p. 41, cite *Ap.* 20 B–C as a similar case.

pupil,[60] and yet that they have this knowledge is based solely on their claim to have it, or, perhaps, their reputation. But Socrates cannot have accepted their knowledge of the nature of piety and beauty based solely on their claims and/or reputations. It is just such claims and reputations that Socrates' experience in testing the Delphic oracle undermined.

(T28) [I]n my investigation in the service of the god I found that those who had the highest reputation were nearly the most deficient, while those who were thought to be inferior were most knowledgeable. (*Ap.* 22 A 3–6, trans. Grube; cf. also 20 E 8–23 C 1)

Socrates is shamming his acceptance of their knowledge, and so his desire to become their pupil, but why? He does this to facilitate the testing of their knowledge. Neither Euthyphro nor Hippias is the sort who would appreciate someone testing his wisdom. Both would be more receptive to questions whose answers would test their knowledge if they took themselves to be responding to someone who wanted to learn from them rather than from someone who wanted to test them. Such shamming is simply another way in which Socrates can do precisely what he claims to be doing in the *Meno* and the *Laches*, viz. testing his interlocutors' claims to know.

Socrates is not shamming his desire to learn from them if they do indeed know what they claim to know.[61] He is only shamming his acceptance of their claim to know. Thus, when Socrates asks Euthyphro and Hippias to say what the relevant F-ness is by looking at examples of F things at (T20) and (T21), he is taking his 'What is F-ness?' question to serve two functions: first, to test the interlocutor to see whether he really knows what he claims to know, and only after this[62] to enable him to learn from him, if indeed he does know.

The other short elenctic dialogues. That the immediate aim of the elenchus is the testing of the interlocutor's knowledge is confirmed by the other short elenctic dialogues. In the other dialogues which explicitly raise the 'What is F-ness?' question (*Charmides*, and *Republic* 1), the

[60] Immediately after Euthyphro's claim to know at 4 E 9–5 A 2, Socrates says '*Then* it is best for me ... to become your pupil' (5 A 3–4; emphasis added). In the *H. Ma.* Socrates says that he resolved that he would learn from any of the wise men like Hippias he met (286 D 5–6).

[61] See e.g. *Crito*, 47 A–48 A.

[62] The priority here need not be temporal. A logical priority will suffice. See e.g. *Ap.* 22 B 5, where Socrates says that he asked the poets what their poems meant in order to test their knowledge and at the same time (*hama*) to learn something from them.

interlocutor's belief that he knows the nature of F-ness is either explicit or implied in every case. In the *Charmides*, Critias' claim to know the nature of temperance is only thinly disguised at 162 D 4–6, while Charmides fails to openly claim such knowledge because, as his answer to the question whether he is temperate makes clear, he is too crafty to make such a profession. He believes that any such profession would nullify his reputation for temperance. It is because of his belief that he knows, as well as his hesitation to admit it, that he so readily accepts Socrates' otherwise implausible argument to the effect that if temperance is present in him then he can say what temperance is.[63] In *Republic* I, Thrasymachus' claim is explicitly reported by Socrates at 338 A 1,[64] while Cephalus, after expressing his contentment and happiness with old age, says

(T29) to him who knows he has committed no injustice there is always a sweet hope and good nurse present to old age (*Rep.* 331 A 1–2),

implying that his contentment is a result of his knowledge that he has committed no injustice, something his riches have helped him avoid. Socrates immediately follows this by asking him whether justice is the same as telling the truth and paying back one's debts.

Polemarchus is the only difficult case. Socrates says that perhaps he knows what Simonides means (331 E 7–8), but this is weak. Perhaps the notion of inheritance mentioned in the transition from Cephalus to Polemarchus indicates that he thinks that knowledge, like wealth, can be inherited. Thus, having heard Simonides, a wise and godlike man, say that justice is to give to each his due, Polemarchus thinks he now knows what justice is. In any case Socrates concludes his discussion with Polemarchus as follows:

(T30) If someone says that the just is giving to each his due and he means by this that harm is due from the just to his enemies and benefit to his friends, the one saying these things is not wise. For he does not speak truly. (335 E 1–4)

The implication is that Polemarchus, who did say that the just is giving to each his due (331 E 1–4), meaning that harm is due from the

[63] *Chrm.* 158 E–159 A. If one is not as sceptical of Charmides' answer as I am, that Socrates is concerned to test Charmides' knowledge is also suggested at 154 E 5–7. Socrates there makes clear that the point of his discussion with Charmides is to see whether or not he has a fine soul in addition to a fine body. At *Ap.* 29 D–E the best possible state of the soul is explicitly associated with truth and knowledge (*phronēseōs*).

[64] See also *Rep.* 345 E 4.

just to his enemies and benefit to his friends (334 B 7–9), is not wise, despite what he might have thought.

Further, even in those dialogues which do not raise the 'What is F-ness?' question, the texts testify to the interlocutors' knowledge-claims which Socrates goes on to test. In the *Ion*, Socrates claims that

> (T31) no one would be a good rhapsode unless he understood the things said by the poet. For the rhapsode must become an interpreter of the thought of the poet to the listeners; but this is impossible to do well for a rhapsode who does not know what the poet says. (530 C 1–5)[65]

Ion thereupon brags of his rhapsodic ability, implying that he thinks he knows what the poet says. Socrates tests this belief by appeal to two principles: (1) if a person knows what some one particular poet says, then he also knows what the other poets say (553 B 7–C 3), and (2) if a person knows what Homer says, then he also knows the art of generalship (540 D–541 B). Ion, however, fails to satisfy the consequents of either of these conditionals. In the *Hippias Minor*, after Socrates admires Hippias' confidence in the wisdom of his soul (364 A 2) and in his intelligence (364 A 4–6), he asks Hippias how he distinguishes between Achilles and Odysseus. There is no explicit connection between this question and Hippias' confidence. Nevertheless, Socrates is suggesting that if Hippias is as wise as he seems to think, then he ought to be able to explain the difference between Achilles and Odysseus. Finally, even in the *Crito*, there is the suggestion that Crito believes he has knowledge which Socrates goes on to test. After Crito has advised Socrates to escape (45 A 3, 46 A 7–8), Socrates argues that in circumstances such as these one ought to follow the advice only of the one who knows what justice and injustice are.[66] Crito, however, does not retract his advice at this point, thereby implying that he thinks he knows what justice and injustice are. Thus, in all these short elenctic dialogues we find the interlocutors believing that they have knowledge and the subsequent testing of that belief.[67]

[65] For present purposes it suffices that Ion accepts this, as he clearly does (cf. *alēthē legeis, ō Sōkrates*; 530 C 7). For this commits Ion to professing to know what the poet says.

[66] Admittedly, Socrates' argument occurs in another context. He offers it to refute Crito's suggestion that he ought to escape because of what others will think. Nevertheless, the conclusion of the argument is that one ought to follow the advice only of the one who knows, a conclusion which Crito accepts without retracting his advice.

[67] The most glaring exception to this rule is Lysis. But even here Socrates makes clear that the point of his conversation with Lysis is to preclude his acquiring such conceit (*Lys.* 206 A, 210 D). That Menexenus thinks that he knows is implied by both Lysis and Socrates at 211 B 7–212 A 7.

The Socratic mission. That we should find in these early dialogues the interlocutors believing that they have knowledge and Socrates' subsequent testing of that belief is not surprising. It is precisely what we should expect given Socrates' description of his practice in the *Apology*, the dialogue in which he most self-consciously discusses it. At 23 B, after Socrates has described in some detail his conversations with the politicians, poets, and craftsmen, he sums up his past and present practice as follows.

(T32) Even now I go around seeking and examining these things according to the god, whenever I think someone of the citizens or strangers is wise; and whenever he does not seem to me wise, serving the god I show him that he is not. (23 B 4–7)[68]

The things which Socrates is here claiming to examine are not things like virtue, courage, and justice, but the words of the Pythia (*Ap.* 21 B 7–9, 21 E 6, 22 E 7–23 A 5). That is, Socrates claims to examine whether anyone is wiser than he.

To understand Socratic practice as an examination of the words of the Pythia we do not need to understand him to be attempting to show that those words are false. That they are false is not something that Socrates recognizes to be a possibility. Rather, in examining the words of the Pythia, he is attempting to discover what they mean.

(T33) Whatever does the god mean? What is he hinting at? For I am aware of being wise concerning nothing great or small. What then does he mean, when he says that I am the wisest? He does not speak falsely. For that is not lawful for him. (21 B 3–7)

Initially, Socrates thought that the Pythia's words could not mean what they naïvely seemed to mean. They could not mean that he knew more than anyone else, for he was not aware of knowing anything. He therefore set out to examine those who were reputed to be wise in order to discover in what way he was wiser than they. To his surprise, however, his conversations with the politicians, poets, and craftsmen did not require a significant change in the surface meaning. For he discovers that, while some did know many fine things which he did not (*polla kai kala*: 22 D 2), none of them knew the most important things (*kalon kagathon*: 21 D 4; *ta megista*: 22 D 7). Unlike himself, however, they falsely believed that they did. Thus, he concluded that the god meant

[68] Note the parallel with 29 D 4–7 and Burnet's note on 29 A 4–6.

that he was wisest to this extent: while no one knew the most important things, he alone did not falsely believe that he did.

If, then, the aim of Socrates' practice is the examination of the Pythia's words as he suggests, he must test all of those who think that they know any of the greatest things. For if anyone thinks he knows some great thing which he does in fact know and fails to think that he knows any great thing he does not know, Socrates' understanding of the oracle must be mistaken. Thus, when Laches, Nicias, Euthyphro, Charmides, Critias, Hippias, Ion, Crito, Cephalus, Polemarchus, Thrasymachus, and Meno all think that they know some of the greatest things (courage, piety, temperance, beauty, generalship, and justice), Socrates will be practising what he describes himself as practising only if his immediate aim is to determine whether they know the things they think they do.[69]

(*c*) *The necessity of knowledge*

The necessity of knowledge to achieve the immediate aim. If this is correct, then, the question arises whether the knowledge that the relevant examples and properties are examples and properties of F-ness is any longer necessary. First, let us consider whether such knowledge is necessary in order to achieve the immediate aim of the elenchus, the testing of the interlocutor's knowledge. In the case of those interlocutors who do know, the question is moot. In their case there is nothing to prevent them from knowing that those examples and properties are examples and properties of the relevant F-ness. Nor is there anything to prevent them from using this knowledge in order to correctly answer the 'What is F-ness?' question, should this be necessary.[70]

[69] Other passages which support this view are *H. Mi.* 369 D 1–5, *Chrm.* 166 C 7–D 6, *La.* 187 E 7–188 A 3, *Ap.* 29 E 4–30 A 2, and *Prot.* 348 C–349 A, although they require comment beyond the limits of this paper. (See also Callicles' account at *Gorg.* 482 C–483 A, although this may not be reliable.)

[70] It might be thought that in order for Socrates to determine that these interlocutors know what they think they know, *Socrates* will need to know that they have answered the 'What is F-ness?' question correctly. But to do this *Socrates* will need to know that the examples and properties are examples and properties of F-ness. If, however, Socrates is committed to (PD), his explicit disavowals of knowledge of the nature of the relevant F-ness will make such knowledge unavailable to him. This problem is deeper than the issue concerning Socrates' commitment to (PD). It is the problem of how a non-expert can recognize an expert. If Socrates does not know what F-ness is, even if he does know examples and properties of F-ness, it is not clear how he will be able to tell when someone has given the correct answer to his 'What is F-ness?' question (cf. *Prot.* 313 D–314 C, *Meno*, 80 D-E). On the other hand, if he does know what F-ness is, then

What about those interlocutors who fail to have the knowledge they profess, i.e. every interlocutor in the early dialogues? If knowledge of examples and properties is necessary to determine that they do not have the knowledge that they think they have, then if Socrates is committed to (PD) the confusion remains. This knowledge, however, is not necessary given Socrates' distinction between knowledge and true belief.[71] Given this distinction, in order to determine that the interlocutor fails to know what the relevant F-ness is Socrates does not need to determine that the interlocutor's answer is false,[72] something which might require knowledge of the relevant examples and properties. Rather, Socrates will only need to determine that some necessary condition for knowledge other than truth is unsatisfied, and I submit that this necessary condition is that one's beliefs concerning the relevant F-ness are consistent.[73] In this case, Socrates and the interlocutor can come to know that the interlocutor fails to have the knowledge that he thinks he has merely by determining that the interlocutor's beliefs concerning the relevant F-ness are inconsistent. To do this neither Socrates nor his interlocutor needs to know that the examples which the interlocutor believes to be F are in fact F. Nor do they need to know that the properties which the interlocutor believes F-ness to have are in fact had by F-ness.[74]

there is nothing to prevent him from knowing examples and properties of F-ness. The point is that this problem remains whether or not we ascribe (PD) to Socrates. (See Nehamas, 'Socratic Intellectualism', 298.) It is worth noting that none of the interlocutors passes the necessary conditions for expertise, conditions which I shall be arguing can be recognized as unsatisfied without any knowledge of F-ness. As a result, we should not be surprised that Socrates does not spend much time worrying about this deeper problem.

[71] That Socrates even in the early dialogues is committed to this distinction is suggested at *Crito*, 47 A-D, *Gorg.* 454 C-E, and *Euthph.* 11 B-E. See Irwin, *Plato's Moral Theory*, 143, and Lesher, 'Socrates' Disavowal of Knowledge', 278 n. 5.

[72] Neither in the sense of showing that it is false *qua* definition nor in the sense of showing that it is false *qua* proposition (see Woodruff, 'The Skeptical Side of Plato's Method', 33).

[73] I cannot defend this suggestion in detail here. But that Socrates is committed to such a necessary condition of definitional knowledge can be seen to follow from his view that such knowledge is sufficient for correctly recognizing examples and properties of F-ness (see (T9) and n. 21 above). A plausible understanding of this view entails that someone who knows what F-ness is will fail to have any false beliefs about F-ness. Thus, his or her beliefs about F-ness will be consistent. (See Woodruff, *Hippias Major*, 147.)

[74] Notice that neither Socrates *nor* the interlocutor needs to know the examples and properties in order to recognize that the interlocutor fails to have the knowledge that he thinks he has. Thus, the subsequent aim of eliminating the interlocutor's false conceit of knowledge once it has been determined that it is indeed a *false* conceit (testified to in

Thus, Socrates can hold (PD) and think that his elenchus can succeed in testing the knowledge of his interlocutors without being confused.

Unfortunately, to say that Socrates *can* hold (PD) and think that his elenchus can succeed in achieving its aim without being confused is not to say that he does. It might be objected that while in order to determine that the interlocutors' purported knowledge is bogus all that Socrates *needs* to do is to show that their beliefs are inconsistent, nevertheless what he thinks he has done is to have shown that their beliefs are false. But to do this, the objection continues, requires knowledge of examples and properties of F-ness.[75]

This, however, is not what Socrates thinks he has done, as a careful examination of the conclusions which he reaches at the end of the individual elenchi in the *Euthyphro*, *Charmides*, and *Laches* would show.[76] Consider, for example, two of the more straightforward

(T32)) can also be achieved without his knowing the examples and properties. That the elenchus does have this subsequent aim of eliminating false conceit may help to explain why the discussions with the interlocutors are as long as they are. If all that Socrates were concerned to do in the elenctic dialogues was to test the interlocutors' knowledge, he presumably could have become satisfied that they were ignorant without encouraging the interlocutor to try again and without making suggestions concerning how to try again. (I owe this suggestion to the anonymous referee.) The testing of the interlocutor's knowledge remains a more immediate aim of the elenchus than eliminating false conceit, since determining that the interlocutor is ignorant is prior to persuading him of his ignorance.

[75] This objection raises a different incompatibility between (PD) and Socrates' use of the elenchus from the one I have been focusing on in this paper. I have been concerned to respond to the allegation that Socrates' commitment to (PD) is incompatible with the aim of the elenchus. My claim is that the immediate aim of the elenchus is to test the interlocutor's conceit of knowledge and that to do this knowledge that the examples and properties employed in the elenchus are examples and properties of F-ness is not required. This new incompatibility concerns the specific conclusions that Socrates reaches at the end of individual elenchi. The suggestion is, to repeat, that while Socrates may not *need* to conclude that the interlocutor's answer is false to determine that his conceit is false, he does.

[76] I take these three dialogues to be paradigmatic of the method Socrates describes himself as practising in the *Apology*. As a result I take the *Euthyphro*, *Charmides*, *Laches*, and *Apology* to form a central core against which all interpretations of Socrates' method must be measured. (See Woodruff, 'Expert Knowledge'.) The *Apology* is the dialogue which can be most confidently relied upon to represent the Socrates under consideration in these contexts, and the *Euthyphro*, *Charmides*, and *Laches* represent Socrates engaging in the practice he describes in the *Apology*. The interlocutors of these dialogues can all be seen to fall into one of the three classes (politicians, poets, and craftsmen) which Socrates describes himself as engaging. (Euthyphro is the only difficult case.) They all profess or are reputed to care for wisdom and the state of their soul. Socrates proceeds to ask them questions both to learn from them, if they have the knowledge they profess, and to persuade them of their ignorance, if they do not. A quick

passages. We have already seen how Socrates concludes his elenchus employed upon Charmides' answer that temperance is quietness. Let me repeat it.

(T8) Temperance is not quietness, nor is the temperate life the quiet life, *at least according to this argument*, since being temperate ought to be the same as being fine. (*Chrm.* 160B 7–9; emphasis added)

Again, at the end of his elenchus on the answer that temperance is modesty, he concludes

(T34) So temperance won't be modesty, *if*, on the one hand, temperance happens to be good, and, on the other hand, modesty happens to be no more good than bad. (*Chrm.* 161A 11–B 1; emphasis added)

In both these passages the conditional nature of Socrates' conclusion cannot help but stand out. Socrates does not conclude that Charmides' initial answers are false. He concludes that those answers are false *if* his other answers are true. That is, he concludes that Charmides' answers, and so his beliefs, are inconsistent.[77] As I say, though, these are two of the more straightforward passages.[78] For the present I shall rest content with the claim that Socrates *can* hold (PD) and think that his elenchus can succeed in testing the knowledge of his interlocutors without being confused, whether or not he does.

The necessity of knowledge to achieve the ultimate aim. But what about the achievement of the ultimate aim of the elenchus, Socrates' and his interlocutors' acquisition of the knowledge of the nature of F-ness? Is knowledge that the examples and properties are examples and properties of F-ness necessary in order to achieve this aim? If it is, nothing that I have said concerning the immediate aim of the elenchus will have removed the confusion with which this section of the paper began.

glance at these dialogues reveals why his practice should have engendered such hostility towards him. I do not mean that in so far as there are differences in the method practised in other dialogues, those dialogues are not representative of the Socratic method. Rather, I only mean that those differences, if they exist, must be reconciled with the method practised in these four dialogues.

[77] Not that Socrates does not believe that the answers are false. But he does not conclude that the answers are false as a result of the immediately preceding argument.

[78] See also the conclusions at *Chrm.* 162B 9–10 (and D 4–6) and 164C 7–D 3, *Euthph.* 15C 8–9, and *La.* 193D 1–9 and 199E 3–11. A complete reply to this objection, of course, requires an examination of each of the conclusions of the individual elenchi.

First, let us be clear that Socrates' and his interlocutors' acquisition of this knowledge is an aim of the elenchus. Nothing I have said in the previous section eliminates the possibility that there are aims of the elenchus other than the testing of the interlocutors' knowledge. Indeed, I have admitted at least two additional aims, viz. Socrates' learning what F-ness is, when the interlocutor knows what he thinks he knows, and eliminating the interlocutor's false conceit, when he does not. Further, I do not want to deny that when, for example, Socrates asks Critias

(T35) Don't you think that it is a common good for almost everyone that how each of the things that are are becomes clear? (*Chrm.* 166 D 3–6; cf. also *Gorg.* 453 B, 505 E, *Prot.* 360 E–368 C)

he is testifying to the acquisition of knowledge of the nature of F-ness as an aim of the elenchus.

What I have argued in the previous section is that, among the various aims of the elenchus, the aim of testing the interlocutor's knowledge holds a special place. It is the immediate aim of every elenchus employed in the elenctic dialogues. In so far as there are other aims of these elenchi, they are posterior to or dependent on the testing of this knowledge, just as in the case of my driving the car to Dale Hall the aim of teaching class was dependent upon my getting to Dale Hall. In the cases of learning from one who knows and eliminating the false conceit of one who does not, the dependence is direct. It would be absurd to attempt to learn from someone who knows before determining that he does know, or to attempt to persuade someone of his ignorance before determining that he is ignorant. In the case of leading someone who does not know the nature of F-ness to this knowledge, the dependence is less direct. For according to Socrates, not only must it first be determined that the interlocutor fails to have the knowledge towards which one is attempting to lead him, but if this attempt is to have any chance of success, the interlocutor must first be persuaded of his ignorance.

This additional link in the chain is testified to in both the *Meno* and the *Lysis*.[79] In the *Meno* it is made clear that in Socrates' view the

[79] V–B might object to citing the *Meno* and *Lysis* as evidence for a Socratic view. But I see nothing incompatible between the view expressed in these passages and the views of the elenctic dialogues. Furthermore, the *Lysis* passage is foreshadowed at *Ap.* 29 B 1–2. Thus, I see no reason not to take this as genuine Socratic doctrine. (See *Soph.* 230 C 3–D 4.)

elimination of false conceit is not an end in itself but rather a necessary first step in his ultimate aim, the interlocutor's acquisition of the knowledge he previously thought he had (84 A 3–D 1). The elimination of false conceit is necessary because prior to his recognition of ignorance the interlocutor feels no need to acquire what he already thinks he has. When the false conceit has been eliminated, however, the interlocutor will feel his lack and seek to have it filled, joining Socrates in his search to acquire such knowledge. In the *Lysis* (218 A 2–B 5) Socrates distinguished between two kinds of ignorance (*agnoian*), one worse than the other. They differ in that those who possess the worse variety no longer believe that they do not know what they do not know, while those who possess the other variety still do. It is only these latter who love wisdom. Thus, if Socrates is to encourage his interlocutors to become lovers of wisdom, if he is to lead them to the knowledge they lack, he must first lead those who possess the worse ignorance, those who think that they know what they do not, to the possession of the better ignorance. Only in this way will they seek to acquire the knowledge that they fail to have. That is, before Socrates can pursue his ultimate aim of leading his interlocutors to the knowledge of the nature of F-ness, he must eliminate their false conceit.

This is important because every interlocutor in the short elenctic dialogues either fails to admit his ignorance (Laches, *La.* 194 A 8–B 4;[80] Nicias, *La.* 200 B 2–C 1; Euthyphro, *Euthph.* 15 E 3–4;[81] Hippias, *H. Mi.* 375 D–376 B, *H. Ma.* 304 A 5–B 4; Critias, *Chrm.* 169 C 3–D 1, 176 B 5–8;[82] Thrasymachus, *Rep.* 354 A 10–11; and the conversations with Menexenus, Cephalus, and Polemarchus get interrupted), or admits his ignorance and the dialogue ends (Charmides, *Chrm.* 176 A 6–B 1, and Ion, *Ion*, 541 E 1–542 B 2). In the first case, the dialogues end before the interlocutor's false conceit has been eliminated. That is, they end before the point at which we find Meno at *Meno*, 79 E 7–80 D 4,[83] and the slave-boy at *Meno*, 84 A 3–D 1, before they have become lovers of wisdom. In the second case, Socrates' discussion with the interlocutor ends immediately after this point is reached. It

[80] Laches says that he knows what courage is, but is unable to say what it is. For the importance of this distinction see Benson, 'A Note on Eristic'.

[81] At 11B Euthyphro only claims not to know what to *say*. See previous n.

[82] Socrates clearly implies Critias' ignorance, but Critias remains unwilling to admit it.

[83] Note that Meno admits numbness both in his lips and in his mind. See n. 80.

ends just when his false conceit is eliminated. In no case, then, do we have evidence for Socrates' method once the false conceit has been eliminated.[84] We do not know how Socrates will proceed to lead the interlocutor to the knowledge of the nature of F-ness, now that the interlocutor is in a condition to be so led, just as someone does not know how I shall proceed to teach class who has only been watching me drive to Dale Hall. As a result, we have little reason to suppose that the method Socrates will employ at this point requires the knowledge of examples of F-ness, and so we have little reason to suppose that it will be inconsistent with his commitment to (PD).

It might be thought, however, that I have overlooked one very important piece of evidence: Socrates' false conceit, if he ever had any, has been eliminated long ago. It is reasonable to think, then, that Socrates would recommend that his recently humbled interlocutors follow his example and proceed as he has proceeded for many years. But how has Socrates proceeded? I have argued that he has proceeded by examining the knowledge of others, not by examining examples and properties of F-ness. I recognize that it is difficult to understand how Socrates hopes to acquire knowledge of the nature of F-ness by this method, especially since he has long ago come to the realization that he is not likely to come across anyone who does know what they think they know (*Ap.* 22 A), but it is, nevertheless, the method that Socrates employs.[85] Further, it is not as if Socrates testifies very enthusiastically to the success of his method. As late as the *Apology*, Socrates thinks that his wisdom lies in his awareness of his ignorance, not in any knowledge he has acquired (23 A–B, 29 B).[86] Thus, I

[84] Actually, the conclusion may be even stronger. In so far as we do have evidence for such a method, sparse though it is, it does not suggest anything remotely resembling the elenchus. In the *Crito*, for example, it might be thought that at 50 A 4–5 Crito does recognize his ignorance and yet the dialogue continues. The speech of the Laws, however, hardly resembles an elenchus. Again, at the end of the *Laches* Socrates suggests that when one does recognize that one does not know (when one recognizes one's confusion, 200 E 5), one ought to seek the best teacher one can find (201 A 3–4). This suggests that once one's conceit has been eliminated one must join Socrates in his divine mission of looking for someone who does know.

[85] It may be worth noting that the Platonic theory of recollection is introduced in the *Meno* at just the point at which the earlier dialogues had come to an end. The theory is *Plato's* answer to how to go on once conceit has been eliminated short of seeking someone who knows. (See H. H. Benson, 'Meno, the Slave-Boy, and the Elenchus', *Phronesis* (forthcoming).) If Socrates had an answer to this question, we have no compelling evidence for what it is.

[86] Vlastos, 6, thinks that if Socrates really did recognize that his method was as unsuccessful as I have suggested, then 'further searching [would] have become a

see no compelling reasons for ascribing to Socrates a method of acquiring knowledge of the nature of F-ness which presupposes knowledge of examples and properties of F-ness. I see no compelling textual reasons for ascribing to Socrates any method for acquiring knowledge of F-ness besides learning from the one who knows.[87] Therefore, I see no compelling reasons for not ascribing (PD) to Socrates.

4. Conclusion

What, then, are we to say about ascribing (PD) to Socrates? Does he hold it, as has been frequently claimed, or does he not, as V–B has claimed? I believe that he does, but much more remains to be said. What I have shown here is that such an ascription provides a nice economical explanation of much of the data. It does not require us to sharply distinguish between the elenctic and the transitional dialogues, at least with regard to it. It does not require taking the terminal paragraph of *Republic* 1 as a later addition. It provides an economical explanation of Socrates' interest in the 'What is F-ness?' question, as well as his commitment to a number of otherwise unexplained principles, which we do have compelling textual reasons for ascribing. It does this without appealing to distinctions which may be un-Socratic and are certainly without textual support. Nor is (PD) without textual support, albeit from dialogues which may not be wholly representative of Socratic doctrine. Finally, it is not incompatible with his use of the elenchus in the elenctic dialogues. It is compatible with the elenchus' immediate aim of testing the interlocutor's knowledge, and in so far as it is incompatible with one's view of how Socrates attempts to achieve the elenchus' ultimate aim of acquiring knowledge of the nature of F-ness, it is this latter view which needs to

charade'. But this is to miss part of the importance of the Delphic oracle. It confirms for Socrates that his search for knowledge, even though it has thus far been unsuccessful, is worthy of pursuit.

[87] This is not to say that I see no reasons whatsoever for ascribing to Socrates a method of acquiring knowledge of the nature of F-ness besides learning from one who knows. Brickhouse and Smith, 'Socrates' Elenctic Mission', have offered a very persuasive account of how Socrates might be attempting to acquire such knowledge—an account which I believe does not require knowledge of examples and properties of F-ness. Furthermore, Plato's method of acquiring such knowledge might be suggestive of Socrates'. It is worth noting that it is difficult to see why the Platonic method should require knowledge of examples and properties of F-ness.

be re-evaluated. There is more textual support for ascribing (PD) to Socrates than for ascribing to him any particular method of achieving such knowledge.

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SCIENTIFIC EXPLANATION AND EMPIRICAL DATA IN ARISTOTLE'S *METEOROLOGY*

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Introduction

IN this paper I shall examine certain significant aspects of Aristotle's scientific practice as recorded in his *Meteorology*.[1] I shall survey a number of examples in order to study the complex relations between scientific theory and empirical data in this treatise. Aristotle advances definitions of a host of meteorological phenomena; these definitions, very broadly considered, conform to the model recommended in the *Posterior Analytics*.[2] That is, individual meteorological subjects such as comets or thunder are defined in terms of a causal analysis resting upon a unified set of underlying principles. The first principles of this science are set forth in 1. 3; there are two fundamental exhalations, one hot and dry, one cool and moist. I shall not here pursue important questions concerning these first principles—in particular whether this

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[1] In fact I shall discuss only bks. 1–3 of the *Meteorology*. This is due less to concerns about the authenticity of bk. 4 than to its fairly obvious lack of continuity with the earlier books in terms of approach and methods. The absence in bk. 4 of the fundamental *archai*, the exhalations, consistently used throughout 1–3, makes bk. 4 seem part of a different project (although it covers subject-matter we would expect to be included on the basis of the treatise's overall programme). See also my discussion in 'Scientific Method in Aristotle's *Meteorology*' (MS 1986).

[2] See *Post. An* 2. 10, and for an interpretation of this model of 'real definitions' see R. Bolton, 'Essentialism and Semantic Theory in Aristotle', *Philosophical Review*, 85 (1976), 514–44.

treatise employs the deductive explanatory structure recommended in the *Posterior Analytics*.[3] Instead, my focus will be on certain steps recorded in this treatise which are not mentioned in Aristotle's model of pure science—steps which precede and follow upon his core explanations (definitions) of meteorological phenomena.

In Section 1 I shall explore the role of the *endoxa*, the reputable opinions or earlier scientific beliefs which Aristotle surveys before providing his own accounts of various phenomena in this science. The proper assessment of Aristotle's use of *endoxa* in science is a topic of much current interest and debate.[4] I believe that the surveys of *endoxa* play a dual role in this work, enabling Aristotle to refine why-questions and to gather relevant empirical data or *phainomena*. The extent of their role cannot be fully grasped without a correlative understanding of Aristotle's use of 'signs' (*sēmeia*) and 'proofs' (*tekmēria*), which are often mentioned in his arguments for the correctness of his own accounts. In Section 2 I shall show that Aristotle uses signs and proofs in an inference pattern now termed 'abduction', to argue from explanatory success to the truth of his proposed analyses. In my concluding Section 3 I shall address another topic that has been of recent interest, whether Aristotle means his account of scientific knowledge in the *Posterior Analytics* to serve as a model for the cognitive state of a scientist prepared to provide explanations, the best structure for organizing and imparting scientific knowledge, or a recreation of the processes of real scientific inquiry.[5] I argue that in the

[3] I do this in a companion piece, 'Scientific Method in Aristotle's *Meteorology*'. Of course, separating these questions from the subjects of this article will result in some regrettable artificiality of analysis.

[4] See J. Barnes, 'Aristotle and the Methods of Ethics', *Revue internationale de philosophie*, 34 (1980), 490–511; R. Bolton, 'The Epistemological Basis of Aristotelian Dialectic' (MS 1987); J. Brunschwig, 'Quelques commentaires sur la communication de Robert Bolton' (MS 1987); J. Cooper, 'Review of Martha Nussbaum, *The Fragility of Goodness*', *Philosophical Review*, 97 (1988), 543–64; D. T. Devereux, 'Dialectic, "The Method of *Endoxa*", and Scientific Inquiry' (MS 1987); M.-J. Kakkuri-Knuuttila, 'Aristotelian Games of Dialectic', in M. Kusch and H. Schroder (eds.), *Text—Interpretation—Argumentation* (Hamburg, 1987); ead. and M. Kusch, 'LSP-Research, Philosophy of Science, and the Question-Theoretical Approach: Some Tentative Suggestions' (MS 1988); M. Nussbaum, 'Saving Aristotle's Appearances', in M. Schofield and M. Nussbaum (eds.), *Language and Logos: Studies in Ancient Greek Philosophy* (Cambridge, 1987); ead., *The Fragility of Goodness: Luck and Ethics in Greek Tragedy and Philosophy* (Cambridge, 1986); G. E. L. Owen, '*Tithenai ta phainomena*', in S. Mansion (ed.), *Aristote et les problèmes de méthode* (Publications Universitaires de Louvain; Louvain, 1961), 83–103, repr. in J. Moravcsik (ed.), *Aristotle* (Garden City, NY, 1967), and in *Articles on Aristotle*, i (1975), 113–26.

[5] On these debates see esp. M. Burnyeat, 'Aristotle on Understanding Knowledge',

key respects in which Aristotle's practice in the *Meteorology* differs from the proposed model of the *Posterior Analytics*, he adds more than mere rhetorical supplements to the ideal model of the latter text. Instead, he reveals a concern for what contemporary philosophers of science call the 'pragmatics of explanation'.

1. The role of *endoxa* within the *Meteorology*

(*a*) *Overview*

As defined in the *Topics*, the *endoxa* include 'what seems so to all or the majority or the wise' ($100^{b}21$–4). Aristotle provides no special rationale in the *Meteorology* for his frequent surveys of predecessors' views, unless we are to count his remark at $339^{b}28$–30: 'We maintain that the same opinions recur among men in rotation, not once or twice or occasionally, but infinitely often'.[6]

In general in his surveys Aristotle studies only the opinions of the wise—Anaxagoras, Heraclitus, Empedocles, the Pythagoreans, Democritus, Hesiod, Hippocrates of Chios, Anaximenes, Cleidemus, and Plato. In no case does he treat any of these men as having offered a unified and comprehensive theory of the meteorological realm, a full rival to his own. Instead, in the course of laying out his own remarkably unified theory, he proceeds via an apparently random series of attacks on various aspects of his predecessors' accounts. In just one instance does Aristotle seem impressed by an earlier view—an account of rivers and winds is termed 'ingenious' (*kompseuma*) at 1. 13, $349^{a}28$–31. More typically, his predecessors are quickly, even derisively, dismissed. Thus Aristotle complains that previous accounts of the winds might have been proposed by (in Lee's translation) 'the man in the street'. Democritus' explanation of why the sea is salty is compared to one of Aesop's fables (2. 3), and Empedocles' account of the same phenomenon is relegated, as

in E. Berti (ed.), *Aristotle on Science: The* Posterior Analytics (Proceedings of the Eighth Symposium Aristotelicum Held in Padua from September 7 to 15, 1978; Padua, 1981), 97–139, and J. Barnes, *Aristotle's* Posterior Analytics, trans. with notes (Clarendon Aristotle Series; Oxford, 1975).

[6] The Greek text cited throughout is that of the Loeb edition (Cambridge, Mass., 1982), and the translations are those of the Loeb translator, H. D. P. Lee, with occasional modifications.

metaphorical, to the realm of poetry. Again on the topic of winds, Aristotle criticizes an earlier view, saying, 'The unscientific views of ordinary people are preferable to scientific theories of this sort (1. 13, $349^{a}27$–8). He often claims not only that previous theories are false but that they are 'silly' or 'absurd'.

(*b*) *Dialectical surveys of* endoxa

Aristotle also dismisses proposals by saying that they lead to 'impossibilities' (*adunata*). The implications of this charge fluctuate. Occasionally he says that the proposed explanation can be demonstrated to be inadequate by the use of reason alone. Thus, for example, he criticizes Democritus' view that comets are (appearances resulting from) conjunctions of planets by arguing that stars (here including planets) appear as individual points; but the appearance of the conjunction of two individual points would *itself* be an individual point, not a comet or something with any greater magnitude. Aristotle says then that this theory fails on the basis of logic or reasoning (*ek tou logou*).[7]

There are other similar instances in which Aristotle rejects a proposal by a relatively simple process of reasoning about its consequences. Thus, for example, in 1. 13, he considers what must be the case if we accept the theory that rivers originate from the collection of rain within a reservoir deep inside the earth: 'It is evident (*phaneron*) that if anyone tries to compute this volume of water constantly flowing each day and then to visualize a reservoir for it, he will see that to contain the whole yearly flow of water it will have to be as large as the earth in size or at any rate not much smaller' ($349^{b}16$–

[7] Among points disputed in recent discussions is whether the *Topics* characterizes dialectic, a special form of logical examination of beliefs through question and response, as itself 'the method of *endoxa*' or as a distinct enterprise with its own rules. Part of what is at issue involves the *Topics*' fairly rigid distinction between the roles of questioner and answerer. Another issue concerns whether dialectical inquiry can 'test' the *endoxa* against empirical data. See Bolton, 'Epistemological Basis', Brunschwig, 'Quelques commentaires', Devereux, 'Dialectic', and Kakkuri-Knuuttila, 'Aristotelian Games'. In describing two major types of treatment of the *endoxa* in the *Meteorology*, one generally 'logical' and one 'empirical', I am not committing myself to a particular view on these disputed issues. However, I do think that the particular way in which Aristotle tests the *endoxa* against empirical *phainomena* in this treatise is not envisaged by the *Topics*; it goes beyond even Bolton's characterization of how dialectic (in particular 'peirastic') can help to supply empirically adequate explanations. See my sect. 1 (*c*) below.

19). Again, he argues in 2. 1 against the *endoxon* that the sea has sources, as follows:

> [I have given] a complete enumeration of the various species of water: and from this classification one can see that it is impossible (*adunaton*) for the sea to have sources. For water that has a source is either running or artificial: but the sea has neither of these characteristics . . . And we know of no volume of water of comparable size that has sources and yet stands of its own accord. ($353^b30–5$)

Later in 2. 9, Aristotle challenges Empedocles' and Anaxagoras' view that thunder and lightning result when fire is trapped in clouds by noting

> There must be a separate and distinct cause of the occurrence of each phenomenon, whether thunder or lightning or anything else. But the cause proposed is far from fulfilling this requirement. It is rather as if one supposed that water and snow and hail emerged ready-made, and did not have to be formed because the atmosphere has a stock ready to hand for each occasion. ($369^b28–34$)

In another especially interesting instance of what might be classified as an ordinary 'by-the-book' dialectical refutation of a proposed explanation,[8] Aristotle advances a three-pronged attack in 2. 2 on the Heraclitean view that the sun is fed by moisture. He argues first that if this is true, then the sun would be constantly changing, like a flame: 'Clearly there would not only be, as Heraclitus says, a new sun every day, but a new sun every second' ($355^a13–15$). Second, there is no more reason to believe that the sun is fed by moisture drawn off the earth than to think that a fire is fed by the water heated over it. And third, the Heraclitean fails to explain the reciprocity between moisture rising up and what returns to the earth; but, as Aristotle says, 'We can see clearly (*phanerōs horōmen*) that the water drawn up always falls again. Even if the correspondence is not exact in any one year or any one place, yet in a certain fixed period what was taken is returned' ($355^a26–8$).

To summarize, in these sorts of discussions of *endoxa* Aristotle reasons against an opponent on the basis of certain unquestioned assumptions (such as that stars appear as points), simple classifications (such as the account of the species of water in 2. 1), or

[8] For a general outline of Aristotle's account of dialectic in the *Topics* see Kakkuri-Knuuttila, 'Aristotelian Games'.

common-sense inferences (such as that the earth could not contain a hidden reservoir of water that is nearly its own size). These discussions are not especially remarkable from the point of view of standard descriptions of dialectic. But they are not typical of Aristotle's treatment of *endoxa* in this treatise. For the most part, Aristotle tends to refute the *endoxa* in this science by placing them up against certain *phainomena* or observed facts—what we might call the empirical data. Indeed, this is most frequently the method by which he presents the data which are of special concern and which an adequate scientific explanation must take into account.

(*c*) Endoxa *and empirical* phainomena

At times Aristotle begins by listing a few key facts about some subject, as he does concerning hail, for instance, in 1. 12: 'In considering the process by which hail is produced, we must take into account both facts whose interpretation is straightforward and those which appear to be inexplicable' (347^b34–7).

More often, though, Aristotle launches straight away into his examination of the *endoxa*, or at any rate of the strongest existing explanatory candidates, and he proceeds to show their inadequacies. His critique may mention some prediction the proposed account makes which turns out to be false, some fact it has overlooked, or simply some claim it makes which does not accord with the facts as 'we have observed' them. I should emphasize that Aristotle does not make use of surveys of the *endoxa* in connection with each and every topic in the *Meteorology*, but rather with those he finds most puzzling. These include, for example, comets (1. 6, 7), hail (1. 12), the origins of winds and rivers (1. 13), the saltiness of the sea (2. 1, 3), earthquakes (2. 7, 8), and thunder and lightning (2. 9). I shall next examine two of the most interesting of these studies, those concerning comets and hail, in more detail.

(*d*) *Comets*

Aristotle devotes all of *Meteorology* 1. 6 to a discussion of previous accounts of comets, before moving ahead to give his own explanation in 1. 7. Here is a sketch of the views he considers:

(1) Democritus and Anaxagoras say that comets are conjunctions of planets; they appear to touch each other because of their nearness.

(2) Some Pythagoreans say that a comet is one of the planets which (like Mercury) appears seldom, and never far above the horizon.

(3) Hippocrates of Chios says that a comet's tail is an appearance caused by reflective moisture drawn along by the comet's motion. It only acquires a visible tail when seen in the north.

In essence, here are Aristotle's responses to each theory:

Against (1) (effective against (2) and (3) as well):

(*a*) Some of the fixed stars have tails. 'And for this, we need not rely only on the evidence of the Egyptians who say they have observed it; we have observed it also ourselves. For one of the stars in the thigh of the Dog had a tail, though a dim one: if you looked hard at the light used to become dim, but to a less intent glance it was brighter.'

Against a variation of (1) which holds that a comet can result from the conjunction of a star with a planet:

(*b*) In this case stars should always appear at the dissolution of a comet, but this is not so. And furthermore, 'We ourselves have observed the planet Jupiter in conjunction with one of the stars in the Twins and hiding it completely, but no comet resulted.'

(*c*) 'On purely logical grounds' we can see that the conjunction of two stars (or of a star and a planet) of which each appear as points will itself appear as a point, not as a comet [this case was reviewed just above].

Against (2):

(*a*) The planets all fall into retrogradation within the zodiac circle but many comets have been seen outside the circle.

(*b*) More than one comet has been seen at a time.

Against (3):

(*a*) Sometimes this planet should be seen without its tail (which has the reflective appearance), but it is not.

(*b*) It is not true that comets appear only in the north, and only during the summer solstice; Aristotle cites instances of comets seen in the south and west, and in the winter solstice.

Aristotle concludes by remarking, 'Though more could be said, this is enough to demonstrate the falsity of current theories of the causes of comets' ($344^a2–4$).

Notice exactly what has occurred in Aristotle's discussion of the *endoxa* concerning comets. First, a number of empirical facts (*phainomena*) have emerged which were not included in the initial characterization (nominal definition) of comets. We have learnt that, like stars,

comets are bright bodies which emerge and follow certain paths through the sky; but they differ in their actual appearance—in having tails. Comets do not occupy the general region of the sky occupied by planets; nor do they occur in any fixed constellation, season, or region of the sky. They seem to appear and disappear at random, and sometimes more than one comet appears at a time. Second, Aristotle has done a great deal to focus his inquiry by raising very specific questions: Why do comets not follow the zodiac? Why do they sometimes appear with stars, sometimes not? Why are their appearances more random and infrequent than those of stars and planets? Third, having criticized earlier views for failing to answer these questions about comets, Aristotle is now under a prima-facie obligation to propose an account which will explain the *phainomena* just noted. That is, in addition to explaining the most obvious feature of comets, their tails, Aristotle must now account for their positions and movements, generation and dissolution, relation to stars and planets, and infrequency of appearance. I shall briefly sketch Aristotle's own account of comets in Section 1 (*f*) below; but I am not really so much interested in assessing his actual explanation as in underscoring Aristotle's own efforts to argue for his theory's explanatory adequacy and superiority to its rivals. These arguments will become clearer when I review his use of signs and proofs in Section 2 below.

(*e*) *Hail*

Aristotle proceeds differently in his discussion of hail; he *begins* by listing various *phainomena*, some of which he calls straightforward, others hard to explain (*paraloga*). He assumes a common understanding of the nature of hail (or of its nominal definition): 'For hail is ice, and this is obvious to all' ($348^{a}33$); also obvious, of course, is that hail is ice which falls from clouds. But beyond these obvious facts, Aristotle cites the following additional *sumbainonta*:

(1) Hail is ice, yet it is commonest in spring and autumn, less so in summer, and least in winter, the coldest season; similarly, it falls in milder districts.

(2) Hail seems to be water frozen up high in the clouds; yet this is odd, for the water has to be up there to become frozen, yet once it is frozen it cannot stay suspended for very long. And hailstones cannot grow in size while they are up in the clouds, since frozen drops will not coalesce as liquid ones will. (Cf. $347^{b}36$–$348^{a}14$)

Next Aristotle considers a previous theory—only one is deemed worthy of note, that of Anaxagoras. Anaxagoras held that hail is formed when a cloud is forced into a cooler region up above it, where the sun's warmth has not been reflected up from the earth. 'And so hailstorms occur more often in summer and in warm districts, because the heat forces the clouds up further from the earth' (348ª18–21). Notice that Anaxagoras' theory 'explains' not only why hail falls and how it is formed, but why it falls *when* it does. Nevertheless, Aristotle raises problems about its explanatory adequacy (348ª21–37). He notes that according to Anaxagoras it should hail more in high places—but it does not. Second, sometimes the biggest hail falls from clouds closest to the earth, but on Anaxagoras' view we should expect just the opposite. Finally, Aristotle observes that sometimes hail is very large but irregularly shaped, indicating that it has fallen close to the earth (if they had formed higher up, the hailstones would have been rounded off by their fall); but once again, this is not what Anaxagoras' view would lead us to expect.

Here again, as in the case of comets, Aristotle introduces the *phainomena* or empirical data about hail via his critique of an *endoxon*. In addition to knowing the facts initially cited in 1. 12, we now know that hail falls frequently in low lands and from clouds near the earth—indeed, this is the source of the largest hailstones. Sometimes hailstones can be very large but not rounded. Once again, Aristotle has raised quite specific questions about his subject: Why does hail occur more in the autumn and spring than in winter, when cold temperatures are more prevalent? Why do larger hailstones fall from clouds nearer the earth, when it would seem that if they fell further they could become larger? What accounts for large irregularly shaped hailstones? Once more Aristotle has committed himself to explaining these complex constellations of facts. He must account for the locale and seasons of hailstorms, as well as certain facts about the sizes and shapes of hailstones falling from particular types of clouds.

(*f*) Endoxa *and Aristotle's explanations*

Aristotle may at the very least use the *endoxa* to supply a nominal definition at the start of an inquiry; certainly he considers it necessary to account for why there are 'comets', i.e. starry objects with tails, or why there is 'hail', i.e. ice which falls from the sky. But it is evident that Aristotle feels no obligation here to propose a theory that 'explains' all

the *endoxa* on a given subject, even those he considers mistaken.[9] He would regard it as misguided to concoct some theory explaining Anaxagoras' mistakes about hail or Democritus' mistakes about comets. Aristotle at least credits his predecessors with having been engaged in the same sort of enterprise as he; so glancing back at their efforts can help his own inquiry both by raising new questions and providing new data. Surveys of *endoxa* furthermore set up expectations for explanatory adequacy. Aristotle aims to generate an account that will be more than merely consistent with the empirical facts, but one that will explain the *phainomena* concerning comets, hail, and so on, many of which have emerged as the result of his critical examination of the *endoxa*. He does not go so far as to maintain explicitly that his own scientific accounts will permit a strict derivation of *all* the *phainomena* he has recorded concerning comets, hail, etc. Nevertheless, his practice indicates that he is confident that his own proposals afford greater explanatory power than their rivals, and he takes pains to point this out.[10]

A rough overview will enable us to see whether and to what extent Aristotle's own explanations of comets and hail constitute improvements over those of his predecessors. The key components of all the scientific explanations offered in *Meteorology* 1–3 are the two *archai* which are basic in this science. These serve primarily as material

[9] This runs counter to what many see as his attitude in a methodologically important section of the *Nicomachean Ethics*. See e.g. Cooper, 'Review of Nussbaum', 553: 'Why . . . does Aristotle make philosophy answerable even in this limited way to *endoxa*? In his extant works he never addresses this question squarely, but the obvious answer . . . is that there is antecedent good reason to expect that some or all of what is reputably believed is true . . . Other things being equal, intelligence when applied to a problem gets things right.' Cooper is here addressing claims made by Nussbaum, *Fragility of Goodness*. See also Bolton, 'Epistemological Basis', esp. sect. IV, p. 35, for discussion of Aristotle's views on the relation between *endoxa* and truth. Brunschwig, 'Quelques commentaires', helpfully suggests that there may be some divergence in Aristotle's opinions on this issue as expressed by his ethical writings and his natural scientific works.

[10] Owen, '*Tithenai ta phainomena*', argues that a successful theory must leave the *phainomena* standing; to this it may be replied that Aristotle sometimes expects more of a theory—that it should not merely be consistent with the *phainomena* but actually explain them. See on this Bolton, 'Epistemological Basis'. There are complex issues here about whether the *phainomena* include *endoxa* or are separate, referring rather to 'empirical data' more narrowly understood. I cannot go into these general issues here. See again Owen and Bolton, artt. citt., also Nussbaum, 'Saving Aristotle's Appearances'. I think it is evident in the *Meteorology* that Aristotle holds that an adequate theory must explain, and not merely be consistent with, the empirical data. But for one puzzling remark running counter to this interpretation see my app. II below.

causes of various phenomena in this realm, though they also seem at times to possess efficient-causal force. In his account of comets Aristotle begins by alluding to what he has hypothesized earlier (*hupokeitai*) concerning the hot dry exhalation. He then proceeds to explain the nature of comets by alluding to this exhalation and also to the movements of bodies in the supralunary realm. The two key contributing aspects of comets are (1) a fiery principle resulting from upward motion in the realm above the earth (the principle of ignition); and (2) a suitably condensed mass of the hot dry exhalation (the fuel). Aristotle further remarks that the phenomena resulting from combinations of these two causal components may vary in shape. They can take either the more familiar form of a long-tailed comet or instead the shape of what 'is called' a bearded star (*kaleitai pōgōnias*, $344^{a}23$). This is an important passage, for it provides an example of how scientific understanding may lead us to group together two phenomena we had formerly described by different names, since they turn out to have the same essence.[11]

Aristotle uses his own account to explain the various facts about comets he sets out in his earlier critique of the *endoxa*: 'The reason why comets are few in number and infrequent, and why they appear more outside the tropics than within them, is that the movement of the sun and stars not only separates off the hot substance but also disintegrates it as it is forming' ($345^{a}6$–9). Since Aristotle believes that sometimes the appropriate masses of hot dry exhalation occur in the vicinity of a star, he can also account for why a comet may, but need not, occur in conjunction with a star: 'When therefore the material gathers in the lower region, the comet is an independent phenomenon. But when the exhalation is formed by the movement of one of the stars—either of the planets or of the fixed stars—then one of them becomes a comet' ($344^{a}34$–$^{b}1$). Comets do not necessarily appear in any particular part of the sky because the hot dry exhalation could be massed anywhere. Several comets might appear in certain rare cases in which the comet-making components occur at more than one place in the sky. And so on.

In much the same way, Aristotle's proposed explanation of hail is couched in terms of his hypothesized fundamental exhalations. He does, however, rely upon an additional complex principle (which he

[11] In other words, the nominal definition of comet as 'long-haired star' directs scientific attention towards a certain subject, though it incorrectly indicates the essence of that subject. See Bolton, 'Essentialism and Semantic Theory'.

takes to have been endorsed previously): the basic idea is that heat and cold can 'condense' one another. In other words, heat applied to something cold will, at least initially, compress the coldness inward, intensifying it. Once more, Aristotle's account of the phenomenon he is studying, hail, has formal and material aspects. In warm seasons, he explains, the heat outside a cloud can condense the coolness in that cloud when it descends into the warmer regions near the earth. Then the cloud's internal moist exhalation is rapidly frozen; since this makes it heavy, it falls to the earth as hail. On this account it is possible, Aristotle believes, to explain some of the puzzling facts we initially observed about hail. For instance, 'Hail is rarer in the summer than in spring or autumn, though commoner than in the winter, because in summer the air is drier; but in spring it is still moist, in autumn it is beginning to become so' ($348^b26–9$). Again, it hails less in high places because the air surrounding clouds is cooler there. And further, larger hailstones come from clouds closest to the earth because such clouds have been more subject to the 'heat compresses cold' principle.

(*g*) Endoxa *and scientific method*

What conclusions can be drawn about the role of *endoxa* in science based upon examples from the *Meteorology*? It may seem simply that Aristotle gains a kind of rhetorical advantage from his method of presenting, and then summarily dismissing, his predecessors' best efforts. This, however, is too simple an assessment.

As I see it, Aristotle uses his surveys of prior theories to accomplish two related tasks. First, in those cases in which he includes such surveys, i.e. precisely when studying the most difficult, intriguing phenomena of this science, he presents the basic data or empirical facts about each phenomenon within the context of his refutation of an earlier view. What may at first seem to be merely a matter of convenience, or perhaps a rhetorical move aimed at general one-upmanship, might instead indicate a special way in which Aristotle sees science as a sort of cumulative group endeavour. That is, he regards it as important to see where an existing scientific theory fails, because it makes a false prediction about something that one might otherwise not have considered relevant, so might not otherwise have observed. An account of comets as planets, for example, predicts that they should appear only within the zodiac

circle; so we are made aware that location in the sky is an important feature of comets and we acquire an important directive for seeking data which go beyond the initial observations about comets' most noticeable features, their tails. Or, if a theory of hail such as Anaxagoras' indicates that larger hailstones should fall from higher clouds, then as scientific observers we are prompted to gather certain *phainomena* about hail and perhaps to notice heretofore unobserved details about what kind of hail falls from what kind of cloud, and in what location and season.

In their second key role, Aristotle's surveys of *endoxa* reflect a picture of science as a problem-solving activity. Aristotle's critical discussion of an earlier scientific explanation, such as Anaxagoras' account of hail, does not merely direct him and his reader/listeners towards an accumulated list of data about hail, it also creates a puzzle or focuses a question about the *phainomena*. A key question about hail is not just what it is (or, in the rephrased version we might expect from certain passages of the *Posterior Analytics*, why does ice fall from the sky?), but rather, why does ice fall from the sky less often in winter than in autumn or spring? After all, it is colder in the winter, and ice is formed by cold. Or in other words, why does hail behave differently from snow?

The complexity of the scientific inquiries in the *Meteorology* is much greater than that allowed for by the *Posterior Analytics*. Perhaps Aristotle's discussion of scientific definition in the *Posterior Analytics*, particularly in 2. 8 and 10, is meant to be very schematic. When he asks about what thunder or eclipses are, he suggests that the scientist will look for a cause which can be incorporated into an appropriately grounded definition. For example, he suggests, thunder might be defined as the noise of fire being quenched in the clouds. This is certainly not his own account, and furthermore, in an actual scientific inquiry about thunder he will raise more specific questions, for example: Why does lightning only sometimes occur with thunder? Why is thunder associated with certain types of clouds? What distinguishes thunder from other loud noises in the sky? These sorts of questions arise because the inquirer has paid attention not only to the empirical *phainomena* but also to the *endoxa*.

Of course, the *Posterior Analytics* emphasizes the need for explanatory complexity when it admits that there are multiple (viz.: four) possible types of causal explanation. It is helpful to juxtapose Aristotle's view of scientific explanation to more modern ones, such as

that of Bas C. Van Fraassen's in his book *The Scientific Image*.[12] Like Aristotle, Van Fraassen is concerned about the asymmetries of explanation.[13] In partial response he reviews recent analyses of the logic of questions, including those of Belnap and others.[14] Focusing particularly on why-questions, Van Fraassen suggests that they may be differentiated according to topic, contrast-class, and relations of explanatory relevance (pp. 141 ff.). It is not necessary to go into the details of Van Fraassen's exposition of these aspects of why-questions in order to recognize their usefulness for describing Aristotle's approach to the *endoxa* in the *Meteorology*. A scientific inquiry is not only launched but actually gets its identity from the specific questions it asks. The *Meteorology* shows that Aristotle finds reviews or previous scientific theories crucial to the process of refining why-questions. As I have suggested above, for example, through his survey of the *endoxa* Aristotle progressively refines the *topic* of his why-questions about comets. The focus is no longer just on 'Why are some stars long-haired?' but 'Why are some long-haired stars so different in their behaviour from other stars?' The *contrast-class* for comets clearly includes planets, since when the scientist asks 'Why do comets appear anywhere in the sky?', there is an implied contrast to planets, which are restricted to the zodiac. And again, questions about the *endoxa* help to indicate just what will be *explanatorily relevant*. In relation to comets, 'Why are there numerous comets now?' involves a particular emphasis: 'Why now, *during a hot and dry season*, rather than earlier, during a rainy cool season?' By surveying *endoxa* the scientist has been directed to observe which seasons are relevant to the appearances of comets.

Of course it could be objected that an Aristotelian scientist does not

[12] B. C. Van Fraassen, *The Scientific Image* (Oxford, 1980). In their 1988 paper Kakkuri-Knuuttila and M. Kusch describe a general 'question-theoretic' approach to philosophy of science as linked to both the Aristotelian tradition and the hermeneutics of Collingwood and Gadamer, with such modern proponents as Nicholas Rescher (*Empirical Inquiry* (London, 1982)), Jaakko Hintikka (*The Semantics of Questions and the Question of Semantics* (Acta Philosophica Fennica, 28. 4; Helsinki, 1976), 'The Logic of Information-Seeking Dialogues: A Model', *Erkenntnis*, 38 (1979), 355–68), and M. Sintonen (*The Pragmatics of Scientific Explanation* (Acta Philosophica Fennica, 37; Helsinki, 1984)).

[13] See also B. C. Van Fraassen, 'The Pragmatics of Explanation', *American Philosophical Quarterly*, 14 (1977), 143–50, and 'A Re-Examination of Aristotle's Philosophy of Science', *Dialogue* (Canadian), 19 (1980), 20–45.

[14] N. D. Belnap, jun., *An Analysis of Questions: Preliminary Report* (Santa Monica, 1963); id. and J. B. Steel, jun., *The Logic of Questions and Answers* (New Haven, 1976). On this see also Hintikka, *Semantics of Questions*.

need to survey previous theories either to supply an initial list of *phainomena* or in order to acquire a clearly focused list of why-questions. Such data could be gathered and questions could be formulated *de novo*. I am uncertain how Aristotle would respond to this point. Comets are rare phenomena, not readily observed. Is it merely helpful to prepare for a possible viewing of a comet by reviewing earlier scientific accounts, or is it essential? My general sense is that, despite occasional passages suggesting otherwise (e.g. *Pr. An.* 1. 30), Aristotle is not committed to an extreme form of (Baconian) empiricism according to which an individual scientist directly confronts and draws hypotheses from the great masses of sensory data available (concerning comets, hail, or whatever) through the use of simple induction alone.[15] It would be equally wrong to attribute to him the Popperian thesis that the goal of science is gradual progress via a slow process of accumulating data which will directly falsify earlier theories—far from it.[16] In Aristotle's view, science can at least in principle be 'finished' and (as we shall see below) certain scientific hypotheses can be actually confirmed. What I have been suggesting here is another way to understand his insistence upon learning from previous thinkers. In particular, I have argued, the scientific investigator examines earlier views in order to refine why-questions and focus the direction of empirical observations. Of course, this should not be taken as grounds for attributing to Aristotle the extreme Kuhnian view that empirical observation in science is always guided

[15] This is a very difficult topic, which I cannot address in detail here, as it would lead too far afield from the *Meteorology*. See, for some discussion of how Aristotle's description of the intuition of first principles in science fits with his overall empiricism, Barnes, *Posterior Analytics*, 248–60, esp. pp. 259–60. Also relevant are discussions in Owen, '*Tithenai ta phainomena*', Nussbaum, 'Saving Aristotle's Appearances', and Bolton, 'Epistemological Basis', about the extent to which Aristotelian examinations of *phainomena* include conceptual analysis. Bolton criticizes an interpretation found in Barnes, 'Aristotle and the Methods of Ethics', and T. Irwin, 'Aristotle's Methods of Ethics', in D. O'Meara (ed.), *Studies in Aristotle* (Washington, DC, 1981), 193–223; as I noted above, Brunschwig, 'Quelques commentaires', suggests that it is important that divergent opinions are often grounded in studies focused on different portions of the Aristotelian corpus.

[16] As expounded in K. Popper, *Conjectures and Refutations* (New York, 1962). Kakkuri-Knuuttila and Kusch, 'LSP-Research', make the point that both the crude empiricist and the falsificationist (or Popperian) rely on a simple view about how directly empirical observations can bear on scientific hypothesis. Despite Popper's influence, this simple view has been considered dubious in the philosophy of science for some time, by Kuhn and others too numerous to list (but including at any rate philosophers otherwise as diverse as Duhem, Feyerabend, Grünbaum, and Quine).

by existing theoretical paradigms.[17] (One clear indicator that Aristotle has no concept of 'paradigm-guided science' is his piecemeal approach to the 'theories' of previous thinkers.)

2. Signs and proofs

(*a*) *Signs and proofs in the* Prior Analytics

So far I have examined Aristotle's use of *endoxa* in structuring scientific accounts of various meteorological phenomena. In saying that these surveys create a prima-facie obligation to provide superior explanations, I have suggested that Aristotle believes that his own accounts surpass rivals in explanatory power. He defends his own proposals not only by alluding to their superior ability to deal with the initially presented list of empirical *phainomena*, but also by claiming that he can account for certain new *phainomena*. These new *sumbainonta* or accompanying facts are often described as 'signs' of various sorts. Aristotle discusses a variety of signs of earthquakes, for example, such as particular cloud-patterns or a special dimmed way the sun might appear on a cloudless day. We now know, thanks to studies of Sedley and others,[18] that in the post-Aristotelian scientific tradition there were important debates about signs, also usually regarded as *sumbainonta*, or accompanying facts. In particular, the Stoics and Epicureans disputed whether such signs played a role in the discovery or evidential support of particular scientific hypotheses. Aristotle's treatment of signs in the *Meteorology* is a neglected antecedent to this later debate.

Now, meteorology even today seems to be a science concerned with the informed interpretation of signs. We say along the Gulf Coast that muggy weather and soft breezes are a sign that a cold front is about to pass through; in the Mid-west people interpret dark green clouds and rapidly decreasing barometric pressure as signs of an approaching tornado; and I have heard it alleged that the behaviour of cows or other

[17] T. Kuhn, *The Structure of Scientific Revolutions* (Chicago, 1970). Kakkuri-Knuuttila and Kusch, 'LSP-Research', point out that there are natural links between what they describe as the question-theoretical approach in philosophy of science and Kuhn's notion of paradigm-guided inquiry, and they note that these connections have been pursued by Stephen Toulmin in *Human Understanding* (Princeton, 1972).

[18] See D. Sedley, 'On Signs', in J. Barnes, J. Brunschwig, M. Burnyeat, and M. Schofield (eds.), *Science and Speculation: Studies in Hellenistic Theory and Practice* (Cambridge and Paris, 1982), 239–72; he discusses writings by, among others, Michael Frede and Gisela Striker.

animals can give some sign of an impending earthquake. Does Aristotle's use of signs in this case amount to anything more than this?[19] I think there is no doubt that it does. Aristotle is actually concerned less with treating various meteorological phenomena, in the sense of *things*, as signs, than with analysing why they can be read as signs.

The terms 'sign' (*sēmeion*) and 'proof' or 'index' (*tekmērion*) are introduced into technical usage in *Prior Analytics* 2. 27. In a recent discussion of this chapter, Myles Burnyeat has noted that here Aristotle is more interested in a concept of signs as *inferences* than in the more ordinary sense in which we might call spots, say, a sign of measles.[20] Aristotle explicitly defines the term 'sign' via its function in certain kinds of reasoning: 'A sign . . . means a demonstrative premiss which is necessary or generally accepted. That which coexists with something else, or before or after whose happening something else has happened, is a sign of something's having happened or being' (70ª8–10).

Aristotle contrasts a sign to a 'probability' (*eikos*), although he may mean (as Burnyeat believes) to treat the latter as a type of sign—the type involving 'generally accepted' rather than 'necessary' premisses. Syllogisms, here called enthymemes, may involve either probabilities or signs. Aristotle must mean that reasoning with either is enthymatic or incomplete when only one premiss is stated.

In general Aristotle holds that 'truth can be found in all signs' (*alēthes men oun en hapasin huparchei tois sēmeiois*, 70ª38). However, signs differ according to the sorts of syllogistic reconstructions which may be offered to represent the inferences they involve. Particularly valuable are signs representable by syllogisms in the first figure: '[A] syllogism in the first figure cannot be refuted if it is true, since it is universal.' To illustrate this sort of case, Aristotle cites this example: having milk is a sign that a woman is pregnant. There is, supposedly, a universal connection between having milk and pregnancy.[21] Logically, we get this reconstruction in a first-figure syllogism:

All women who have milk are pregnant.	(All) B is A
This woman has milk.	(Some) C is B.
This woman is pregnant.	(Some) C is A.

[19] The reader may notice that I sidestep tough questions here about the status of signs in the contemporary 'science' of meteorology.

[20] M. Burnyeat, 'The Origins of Non-Deductive Inference', in Barnes *et al.*, *Science and Speculation*, 193–238, at pp. 194–9.

[21] Burnyeat discusses the factual problems of this case; see 'The Origins of Non-Deductive Inference', 204–5 n. 30.

This sort of case is contrasted with others in which signs may be represented by invalid second- or third-figure syllogisms. Aristotle first summarizes by calling a sign in general, as a middle term, an 'index' or 'proof' (*tekmērion*) of something: 'For the name "index" (*tekmērion*) is given to that which causes us to know, and the middle term (*to meson*) is especially of this nature' (70^b1-4). However, just after this remark he seems prepared to reserve the label *tekmērion* for those signs alone which are representable as middle terms in *valid* first-figure syllogisms.[22] In other words, having milk serves as 'proof' that a woman is pregnant,[23] but other signs may not be proofs.

Now it is clearly the case, but still worth mentioning, that a proof is not the 'cause' of whatever it is proof of: having milk does not cause being pregnant, but is in fact caused by it. Nevertheless, this, like other signs, is 'that which causes us to know'. Our awareness of the one fact (that the woman has milk) is grounds for inferring the other fact about the woman (that she is pregnant). Indeed, Aristotle maintains that 'the conclusion which is reached through the first figure is most generally accepted and most true (*endoxotaton gar kai malista alēthes*)' (70^b5-6). But we must be careful here, because, strictly speaking, Aristotle holds that only 'the' cause, i.e. the true cause, is a cause of our knowing, i.e. *validly demonstrating* (cf. *Post. An.* 1. 2) the conclusion that the woman is pregnant. The true cause is the basis for proper inference because it represents the order of being as it really is. Aristotle's causal explanation for the presence of milk in humans is provided within his discussion of human pregnancy in *Generation of Animals* 4. 8. As we would expect, he there describes a final cause—nurturing the infant—and also a material/efficient causal story. The latter involves an excess of material in the pregnant woman at around seven months or so. Aristotle thinks that, as the process of baby-building nears completion, 'then there is a more surplus residue, because less of it is being used up' (776^a31-3). This surplus residue takes the form of milk. In other words, pregnancy causes having milk because through insemination the male's heat has introduced a 'concocting' agent into the woman's body. This agent directs that her available material be put to service, and seven months or so into the process it also results in her having milk. So, according to the *Posterior*

[22] This is how Burnyeat takes him too; see ibid. 196.

[23] There are important considerations here about the modal and epistemic status of the true universals involved in syllogistic reconstruction of proofs. Burnyeat discusses these in 'The Origins of Non-Deductive Inference', 204–5.

Analytics, genuine knowledge about 'Why is this woman pregnant?' requires knowing the facts about insemination and nurturing infants; and only such knowledge counts, strictly speaking, as 'the' cause both of our knowing that the woman is pregnant and that (consequently) she has milk. Knowledge through signs might show us *that* the woman is pregnant, but it does not explain *why*.[24]

(*b*) *Signs and proofs in the* Meteorology

I have emphasized these points about various sorts of grounds for knowledge and inference because we need to be clear about them so as to understand Aristotle's claims about signs and proofs in the *Meteorology*. In an informal survey (based on the citations in Lee's index) I have found nineteen occurrences of the term *sēmeion* together with four occurrences of *tekmērion* in something like the technical (inferential) use set forth in the *Prior Analytics*.[25] It is, to be sure, difficult to force some of these occurrences into any clear inferential pattern; some may be ordinary everyday uses, as when Aristotle speaks of snow as a sign of a cold season or country (1. 11, 347^{a}28). Once he counts something as a sign which corroborates something else he took to be an initial fact: the fact that hailstones are not rounded off is proof that they are frozen close to the earth (1. 12, 347^{a}33). In a more interesting passage about dew and frost he cites the fact that they are not formed on mountains as a sign that they are due to vapour not rising very far. We shall see longer and more elaborate examples along these lines in a moment.

One rather remarkable sign mentioned in this text must be counted as among the type Aristotle describes in the *Prior Analytics* as merely probable or an *eikos*. This sign is mentioned at 2. 1 in his discussion of why the sea cannot have sources, and of how rivers flow from higher parts of the earth, those towards the north. Here Aristotle writes: 'An indication that the northerly parts of the earth are high is the opinion

[24] Burnyeat rejects Ross's ('natural') view that a sign must be more familiar or knowable than what it signifies, and he claims that in the *Prior Analytics* 'Aristotle's account of signs makes no use of epistemic notions' (p. 205). According to Burnyeat, Aristotle leaves it open that 'pregnancy could be a sign of lactation'. I agree that this is so. However, what is crucial about a proof is that it is *a* cause of our knowing something, although on its own it cannot count as *the* cause; to obtain *the* cause we must arm ourselves with a proper scientific demonstration.

[25] As Burnyeat notes, Aristotle elsewhere uses *sēmeion* more informally to designate things rather than propositions or bases for inferences. See Burnyeat, 'The Origins of Non-Deductive Inference', 194 n. 3.

of many of the ancient meteorologists that the sun does not pass under the earth but round its northerly part, and that it disappears and causes night because the earth is higher towards the north' ($354^{a}27$–32). This passage is especially interesting because Aristotle cites as a 'sign' (*sēmeion*) something which is merely said to have been believed by the ancients—a clear reference to an *endoxon* which he tries to use to lend support to his own theorizing.

The most extended and complex allusions to signs in this work, together with mention of *tekmēria*, seem to cluster around three especially problematic phenomena in meteorology: comets, earthquakes, and the saltiness of the sea. In the next sections I shall consider the first two of these examples in more detail, to uncover the inferential structure and scientific methodology at work in them.[26]

(*c*) *Comets*

As noted in Section 1 (*f*) above, Aristotle uses his own account of comets to explain empirical data about comets collected during his survey of the *endoxa*, such as their rarity, paths in the sky, shapes, and relations to stars. Towards the end of his discussion, and after providing his own explanation, he attempts to lend persuasiveness to his account of comets by discussing a new empirical point: comets are likely to occur during seasons that are windy and dry ($344^{b}28$ff.). He says that a multiplicity of comets 'signify' (*sēmainousi*) wind and drought (there are subtle variations, such as the claim that when comets are smaller or dimmer the wind or drought is less noticeable). We can draw an instructive parallel between this example of a sign ('Frequent comets signify wind and drought') and the example from the *Prior Analytics* ('Milk signifies that a woman is pregnant') as follows:

All seasons with frequent comets are windy and dry.	(All) B is A.
A certain winter was a season with frequent comets.	(Some) C is B.
A certain winter was windy and dry.	(Some) C is A.

Recall that, although milk is a sign of pregnancy, it does not cause it; rather, certain facts associated with pregnancy cause a woman to have milk. So also here Aristotle believes that comets signify, but do not

[26] I discuss the third and longest of these cases in app. 1.

cause, wind and drought; rather, factors involved in the wind and drought (i.e. a predominance of masses of hot dry exhalation) also cause the occurrence of multiple comets. Each sign could be classified as a 'proof' of what it signifies, since in each case the sign is a 'most reputable' cause of our knowing the associated phenomenon.

It might be objected that there is insufficient evidence to treat the example about comets just discussed as a 'proof' or sign representable in a valid first-figure syllogism. Signs which are to count as *tekmēria* could be described as sufficient conditions of what they signify. Aristotle does in fact maintain that the appearance of multiple comets is a sufficient condition of a windy and dry season. Indeed, he argues not only that multiple comets are a sign of wind and drought but that *this fact* (this signifying relation) is *itself* a proof (*tekmērion*) of the correctness of his account of comets—it confirms his view that their constitution is fiery ($344^{b}19$–21). Milk is a proof of pregnancy *because* these two *pathē* can be connected in a valid first-figure syllogism. But this is not the whole story: these *pathē* are connected *because* the actual factors that cause pregnancy (those demonstrable by a scientific syllogism) also explain why a woman has milk. Now here, similarly, multiple comets are proof of a dry windy season *because* there is an appropriate and universal connection between comets and windy dry seasons. Again, this is not the whole story: the true scientific cause for windy dry seasons, predominant masses of the hot dry exhalation, would also be cited in the scientific explanation of the frequent occurrence of comets. Here Aristotle goes beyond the *Prior Analytics* account, by citing a particular sign-relation as itself evidence ('proof') for his background scientific explanation; I shall have further comments about this special use of *tekmērion* in Section 2 (*e*) below.[27]

(*d*) *Earthquakes*

Aristotle holds that earthquakes occur when the hot dry exhalation in its dynamic form as wind is forcibly and rapidly thrust into various hollows of the earth. As usual, he collects various data about earthquakes in the course of his preliminary survey of the *endoxa* (here, in

[27] As something of an aside, it is interesting to contrast Aristotle's thoroughly naturalistic interpretation of meteorological signs with more superstitious ones prevalent in later, more 'enlightened', eras. See, for an example of how an educated man of the 17th cent. might see comets as indicators of general disaster, W. C. Salmon, *Scientific Explanation and the Causal Structure of the World* (Princeton, 1984), 11–12.

2. 7, he reviews proposals from Anaximenes, Democritus, and Anaxagoras). It is especially noteworthy that he criticizes Anaxagoras' view for failing 'to account for any of the peculiar features of earthquakes, which do not occur in any district or at any time indiscriminately' ($365^{a}34$–6). In the very long chapter 2. 8 Aristotle first gives his own acount of earthquakes and then proceeds to show how his theory proves superior to that of Anaxagoras in explanatory power. Indeed, he marshals together an amazing number of features of earthquakes which (he thinks) he can account for; none of these empirical facts[28] was noted in his treatment of Anaxagoras or, indeed, before he provided his own definition. Thus he explains in considerable detail why most earthquakes occur in calm weather, at night, in places 'where the sea is full of currents or the earth is porous and hollow', most often in spring or autumn or during rains and droughts, at an eclipse of the moon, with aftershocks, with noises preceding them, with accompanying jets of water or tidal waves, in narrowly circumscribed localities, in the form of either (horizontal) shudders or (up-and-down) throbs, more rarely on islands far out to sea . . . etc. And he concludes with perhaps justifiable pride by saying 'This completes our examination of the nature and causes of earthquakes, and of their most important attendant circumstances (*sumbainonta*)' ($369^{a}8$–9).

Now, in the course of setting forth this whole series of explanations Aristotle several times mentions signs or proofs. In the first passage he claims that there are 'signs of these things' (viz. of his account) in certain observations about earthquakes which did not cease until wind broke out with hurricane force ($366^{b}31$ ff.). Again, we can call upon the *Prior Analytics* discussion to represent the inference Aristotle has in mind as taking a form something like this:

> In every case of turbulence where the wind escapes, the earthquake ends.
> In this case of turbulence the wind escapes
> ---
> In this case of turbulence the earthquake ends.

Escaping wind is a sign of an earthquake's ending since an earthquake is a sufficient condition for trapped wind. Once more, the sign reveals

[28] It should be obvious that I have been using the term 'explain' throughout this paper, but especially in this section, in the sense of 'purport to explain', and here similarly I speak of 'empirical facts' as 'what Aristotle takes to be empirical facts'.

the phenomenon *because* it indicates something that is causally connected to it.

In the next paragraph Aristotle speaks of a proof (*tekmērion*) that winds circulate beneath the earth:

> For when a south wind is going to blow it is heralded by noises from the places from which eruptions occur. This is because the sea, which is being driven forward from far off, thrusts the wind that is erupting out of the earth back again when it meets it. This causes a noise but no earthquake because there is plenty of room for the wind, of which there is only a small quantity and which can overflow into the void outside. (367ª15–20)

This passage claims first that noises within the earth are a sign of a (south) wind. It then explains that this signifying relation holds *because* Aristotle's account of earthquakes is correct: the rumbling noises signify south wind because they are like a mild earthquake which occurs due to the wind's being trapped under the earth.

Here and in the next use of the sign terminology in this chapter Aristotle is arguing, just as he did concerning comets, that his ability to explain particular signs indicates that his account is correct. He notes, 'Further evidence that our account of the cause of earthquakes is correct is afforded by the facts that before them the sun becomes misty and dimmer though there is no cloud; and before earthquakes that occur at dawn there is often a calm and a hard frost.' In this passage Aristotle mentions two concomitants (*sumbainonta*) of earthquakes; these signs (*sēmeia*) can again be regarded as sufficient conditions for the presence of the crucial causal factors of earthquakes. That is, there is a universal connection between the misty dimmed sun on cloudless days and earthquakes; in his next paragraph Aristotle uses the phrase 'necessarily' three times and also speaks about causal processes which follow from the essential nature of heat by itself (*kath' hautēn*). A misty dimmed appearance of the sun on a cloudless day signifies an earthquake *because* both are caused by the same general factors: 'The sun is necessarily misty and dim when the wind which dissolves and breaks up the air begins to retreat into the earth.' Cold and calm also signify earthquakes *because* they too are related to the 'right' causal conditions: before an earthquake, 'the exhalation, which is by nature essentially warm, is directed inwards . . . So the warm element disappears into the earth, and whenever this happens, the vaporous exhalation being moist condenses and causes cold.'

Yet another closely related 'sign' of earthquakes can be similarly

explained. Sometimes earthquakes are signalled by a fine long streak of clouds in the sky or of breakers in the sea: 'The wind produces the same effects on the cloud in the sky as the sea on the shore, so that when there is a calm, the clouds that are left are all straight and fine like breakers in the air.' Here too the sign that indicates an earthquake does so, Aristotle tells us, *because* it is related to what he has argued is the real cause of earthquakes, the exhalation (suitably qualified). Aristotle explains numerous other features associated with earthquakes in terms of his core account (of exhalation rushing inwards); though they are not explicitly referred to as signs, it seems likely that in many cases the *pathē* under consideration could count as such. Thus the noises in the earth before earthquakes could be heralds just as the fine line of clouds would be; or, again, the fact that Aristotle can explain aftershocks should be taken to lend credibility to—or to serve as a sign for the truth of— his causal accounts.

In one final case which is importantly different Aristotle cites something which could not be treated as a sign of earthquakes in this same sense, namely, an eclipse. He remarks that 'sometimes' the two phenomena are associated. Perhaps, since the connection between these two phenomena is not universal, an eclipse is only a somewhat trustworthy sign of an earthquake. Even in this case there is some background cause linking the two phenomena: a type of wind that was being held in counterbalance by heat from the moon rushes back into the earth as the moon's heat subsides during the eclipse. Thus an eclipse is after all a sign, a somewhat trustworthy bit of evidence that something is going on which will probably affect balances of light and warmth affecting the earth's wind systems; and these imbalances in turn *might* be translated into the dramatic causal forces resulting in an earthquake.

(*e*) *Signs, proofs, and abduction*

In these arguments of the *Meteorology* Aristotle is doing far more than informing readers about how to interpret various weather signs; he is employing a venerable, if questionable, strategy for the defence of scientific realism, the strategy of 'abduction'. Roughly, this strategy involves arguing from explanatory success to the truth of a scientific theory. As a scientific realist Aristotle is committed to maintaining that it is in principle possible for a scientific theory to provide true and accurate accounts of the actual causes of the empirical phenomena it

investigates. In meteorology, for example, Aristotle would maintain that the exhalations which are fundamental principles of meteorology really do exist and do function in just the ways his theory describes.[29] What evidence can be cited for this conviction? Abduction is a form of inference to the best explanation: the best explanation for a theory's predictive success is that it is true, i.e. that it describes the world as it really is. Indeed, abductive arguments maintain that 'the (approximate) truth of a scientific theory is the only possible explanation of its predictive success'.[30] Even if Aristotle is arguing merely that his theoretical explanations seem workable, and that this constitutes some reason to believe them, he is employing an interesting and controversial strategy.[31] But he often (either explicitly or implicitly) argues for more, that his theory's workability provides a proof of his correctness, or a valid ground for the inference that his causal story is a true one.

Contemporary anti-realists criticize abductive arguments as circular or question-begging[32] because abduction involves a sort of defence of induction through the use of induction. In a recent discussion, for example, Richard Boyd briefly sets out the anti-realist argument as follows:

> The issue of scientific realism is—at least insofar as the dispute between realists and empiricists is concerned—a debate over the legitimacy of inductive inference to the best explanation ... Arguments for realism ... employ just this sort of inference, and thus, simply beg the question between realists and empiricist antirealists.[33]

How exactly could Aristotle defend his abductive strategy of citing signs as evidence for the truth of his own causal hypotheses? In some

[29] However, Aristotle's chapter on comets contain a puzzling and anti-realist methodological remark which I discuss in app. II.

[30] As phrased by J. Leplin (ed.), *Scientific Realism* (Berkeley, 1984), 1.

[31] For Epicurean uses of something like this strategy—i.e. citing compatibility with *sumbainonta* as a form of evidence for a theory—see Sedley, 'On Signs', esp. pp. 266ff. on non-contestation. See also app. II below.

[32] However, this topic is most often addressed in relation to scientific theories referring to theoretical entities, so what is at stake in particular is realist commitments to the existence of these entities. For a helpful introduction, see Leplin, *Scientific Realism*, esp. pp. 1–7. Also relevant are the essays included in P. M. Churchland and C. A. Hooker (eds.), *Images of Science: Essays on Realism and Empiricism, with a Reply from Bas C. Van Fraassen* (Chicago, 1985).

[33] R. N. Boyd, 'The Current Status of Scientific Realism', in Leplin, *Scientific Realism*, 41–82, at p. 66. The anti-realist he is describing is Arthur Fine, and the realist arguments mentioned here are said to be those 'of the sort Fine criticizes'.

cases he could point to background deductive arguments; as I have indicated above, he views certain especially interesting signs as sufficient conditions of what they signify. In these cases, reasoning from a sign to a phenomenon is valid because, as Aristotle explained in the *Prior Analytics*, there is some universal connection between relevant *pathē* (e.g. pregnancy and milk) which can be represented in a deductively valid first-figure syllogism. But what provides such syllogisms themselves with scientific support? How, for example, can the scientist be sure of possessing the right background syllogism of a science, for example a demonstrative explanation from biology which would explain why women get pregnant? Here Aristotle is arguing that usefulness provides at least partial corroboration of such a causal account. There is more than one reason to believe one has the genuine scientific account if the same causal story can explain several *pathē*.

Perhaps Aristotle's treatment of signs as inductive evidence for the truth of scientific claims reflects his more relaxed use of 'sign' in *Prior Analytics* 2. 27; recall that there he maintained that signs of all types have a role in revealing truth. Signs point us towards an understanding of the real cause of a signified phenomenon. Burnyeat emphasizes in his review of the *Prior Analytics* doctrine of signs that 'the purpose of this technical exercise is *not* to reject the inferences which do not admit of a formally valid reconstruction'.[34] As Burnyeat sees it, in allowing all signs some value in indicating truth, Aristotle opens the door to forms of non-deductive inference. This move is crucial for the philosophy of science; indeed, Burnyeat believes that Aristotle's logic is more open and potentially useful for philosophy of science than that of the Stoics who followed him: 'If one believes that an adequate philosophy of science must find a place for nondeductive as well as for deductive logic, one will conclude that, as logicians, Aristotle was a better friend to the sciences than Zeno and Chrysippus.'[35] In saying that a sign supplies evidence that is *endoxotaton* or *malista alēthes* (most reputable and most true) for a conclusion, Aristotle 'implies that the inferences reconstructed in other figures do have some, though a lesser, claim to reputability and truth' (p. 197). Even non-'proof' signs

[34] Burnyeat, 'The Origins of Non-Deductive Inference', 196.

[35] Ibid. 238. For further discussion of development of signs within the philosophy of science, both by the Stoics and by Epicurus, see also Sedley, 'On Signs'. The role of signs in confirmation in the *Meteorology*, as I proceed to interpret it, has interesting parallels to their role in Epicurus' theory, as set forth by Sedley: see esp. his pp. 267–9, 270–1.

represent 'certain common and useful inferences of ordinary life' (p. 196).

I believe that Aristotle accords certain signs an important evidential role in arguing for the truth of his proposed definitions of meteorological phenomena. Even a sign of a non-proof category can serve as a 'reputable' (*endoxon*) indicator of a fact. This is so because all signs are related in *some* way to a properly demonstrative syllogism. An eclipse, for example is a sign but not a proof of an earthquake.[36] In this case Aristotle offers a single causal explanation which helps to account for both phenomena, without requiring that they be universally or necessarily associated. The sign is a sign because there is a background link; furthermore, Aristotle cites the sign as partial evidence that he is right about this link.

In other cases the signs Aristotle describes have closer and more integral connections to the phenomena they signify, even if they are not explicitly regarded as 'proofs'. Thus Aristotle remarks that a misty dimmed sun signifies an earthquake; and he also explains why. He argues that this sort of sun is a sign of earthquakes *because* his causal account of earthquakes is true. What is the structure and purpose of this argument? Aristotle marshals explanations of why various things as well as this one are signs of earthquakes in order to defend the plausibility of his own account of earthquakes. He believes that he can go beyond explaining the initial data about earthquakes, so as to explain the *sumbainonta*, the associated empirical facts which are signs of earthquakes. Thus signs function evidentially in support of his causal hypotheses.

As Burnyeat suggests, signs allow Aristotle the use of certain everyday forms of inference. In the *Meteorology* Aristotle uses signs as part of an argument form involving more than inductive inference *to phenomena* (of the sort practised by everyday 'weathermen'); instead, using an abductive strategy, he constructs inferences to the *correctness of his accounts of phenomena*. The structure of such inferences is very clear in those cases in which Aristotle describes certain sign-relations as themselves signs of the accuracy of his own accounts. When Aristotle says that the fact that comets signify wind and drought is itself a sign (*tekmērion*) of the correctness of his causal analysis of comets, he is really invoking a sort of *meta-sign*. That is, he takes the fact that

[36] Surely a variety of the phenomena Aristotle calls signs of earthquakes will also fall into this category of non-proof signs; see also app. 1 below.

something is a sign as itself the sign of something else—of the truth of his analysis of comets. This move is not exactly envisaged in the *Prior Analytics* discussion of signs, but neither is it incompatible with that discussion. Aristotle seems to argue as follows: 'The fact that comets are a sign of wind and drought is a sign that my account of comets is correct. The possessor of a true and adequate account of comets can also explain why comets are a sign of wind and drought.' We can compare this reasoning to a parallel reconstruction of his *Prior Analytics* exposition: 'The fact that having milk is a sign of pregnancy is proof that my account of why women have milk is correct. There must be a true and adequate explanation for why women have milk, and the possessor of this true and adequate explanation can also explain why milk is a sign of pregnancy.' Aristotle reasons in this complex way in the *Meteorology* both here in his claim about comets and also in the passages I discussed about earthquakes. Certain signs are valid indicators of phenomena *because* they bear a special relation to the true causal analysis of those phenomena; and Aristotle would cite this same point in explicating the *Prior Analytics* example of a *tekmērion*. It is just this italicized *because* that Aristotle invokes with his use of meta-signs in the *Meteorology*.

Other signs function in less rigid argument-patterns as indicators that Aristotle's definitions of meteorological phenomena are correct. These signs usually involve empirically observable facts, *phainomena* or *sumbainonta*. These facts are functionally parallel to the facts cited earlier during Aristotle's surveys of *endoxa*; they can be paired up with the initial *endoxa* in three significant ways. First, all these facts could be cited in a new and revised list of the *endoxa*, or most reputable facts of this science. Second, these are all particular sorts of *endoxa*, empirical facts available to *aisthēsis*; as such, they ought to be accounted for by the scientist even if they are not universally or necessarily associated with the subject under investigation. Third, and finally, by claiming that his hypotheses do explain all these facts, both those recorded initially and those added on as signs or proofs, Aristotle provides inductive evidence for the truth of his own scientific theory.

3. The pragmatics of explanation

How is Aristotle's procedure in the *Meteorology* related to the formal outline of scientific method he presents in the *Posterior Analytics*? On

the most obvious level the *Meteorology* differs from the pure model by its inclusion of the two main features I have examined in this article, surveys of *endoxa* and citation of signs and proofs.[37] But this question is made more difficult to answer by recent disputes about the actual purpose of the *Posterior Analytics*' outline of demonstratively rendered scientific knowledge. In his article 'Aristotle on Understanding Knowledge', Myles Burnyeat has challenged the interpretation which he says 'promises to become a new orthodoxy', that advanced in Jonathan Barnes's Clarendon edition of the *Posterior Analytics*. In brief, Barnes argued that the *Posterior Analytics* advocates demonstration not as a method of discovery or a model of explanation, but as the best organization for teaching or imparting knowledge. Burnyeat responds with two critical points. First, he argues, Aristotle was himself too good a pedagogue to have believed that demonstration from first principles was the most effective way to teach or convey knowledge (pp. 116–17). Instead, he frequently emphasizes the need to begin by citing what is more familiar 'to us' or to the students of a discipline. (This may involve beginning from the *endoxa*, for instance.) Second, Burnyeat presents an elaborate case for translating Aristotle's term *epistēmē* (usually translated as 'scientific knowledge') as 'understanding'. His point is that, for Aristotle, *epistēmē* involves not only knowing a proposition but being in a position to explain it by suitable demonstration of it from first principles. Burnyeat emphasizes that a proposition can be *known* without being understood—indeed, this is likely to be the position of a young student or learner. Converting knowledge into understanding may ultimately involve conveying the science's first principles to the learner; but more immediately what is required are some first steps which enable the learner to begin making the proper connections to other familiar items.

Burnyeat's interpretation of Aristotelian *epistēmē* as 'understanding' is problematic for a variety of reasons.[38] The key contrast he develops

[37] This is leaving aside questions about just how Aristotle's definitions in this science conform to the demonstrative/syllogistic guide-lines set out in the *Post. An.* In 'Scientific Method' I argue that there is general conformity, although Aristotle's use of multiple causal accounts (e.g. accounts combining both material and formal causes) of the same phenomena complicates the picture.

[38] On Burnyeat's view, a single proposition can be the object of two distinct cognitive states. At first, it is *known* and subsequently it is *understood* when the knower acquires a demonstration of it. But Aristotle describes such shifts in *cognitive state* as, indifferently, shifts in the *object known*. For example, he writes in *Post. An.* 2. 8 that a scientist who knows the definition of either thunder or an eclipse will know the relevant syllogism. Knowing the essential nature of either phenomenon is just knowing its cause: that

between 'knowledge' and 'understanding' is said to reflect 'two things which present day philosophy segregates into distinct areas of inquiry' (p. 97). These are first, 'an account of the conditions for a proposition to belong to a body of systematic knowledge like geometry, physics or botany'; such an account belongs, says Burnyeat, to the discipline of philosophy of science. Second, there is 'an account of the cognitive state of the individual person who has mastered a body of systematic knowledge'; this second thing belongs to the realm of epistemology. 'Knowledge' is taken to be roughly sketched out as in traditional epistemology, which views it as justified true belief. *Scientific* knowledge or 'understanding' requires incorporating a known item in specified ways within a larger body of information with unifying laws and principles. Here Burnyeat cites Michael Friedman's article, 'Explanation and Scientific Understanding',[39] as setting out the paradigm (and he thinks it one Aristotle could agree to). As Friedman has characterized it, 'scientific explanation is in the first instance explanation of generalities (laws) rather than the explanation of particular events' (p. 109).

But, as a matter of fact, explanation is a very controversial notion in contemporary philosophy of science. In a recent article, 'Explanation and Realism', Clark Glymour notes that there are three main contemporary approaches to scientific explanation:

> Philosophical theories of scientific explanation can be roughly divided into three types: purely logical theories, which analyze explanation solely in terms of logical relations and truth conditions; theories with extra objective structure, which impose objective conditions on explanations beyond those of truth and logical structure; and theories with extra subjective structure, which impose on explanations psychological conditions of belief, interest, and so forth.[40]

Glymour places Friedman, whose account Burnyeat relies upon, in his second category (along with Salmon, Brody, and Causey). For our purposes, however, it is more interesting to consider representatives

thunder, for example, is 'the quenching of fire in cloud' (he says here). Notice that it makes no sense to say that one could 'know' this proposition in Burnyeat's sense of 'restricted knowledge': to know it *is* to understand it.

[39] M. Friedman, 'Explanation and Scientific Understanding', *Journal of Philosophy*, 71 (1974), 5–19.

[40] C. Glymour, 'Explanation and Realism', in Churchland and Hooker, *Images of Science*, 99–117, at p. 104.

from Glymour's third category.[41] Peter Achinstein, for example, in *The Nature of Explanation*, criticizes certain philosophers like Carl Hempel for regarding explanations as *entities* of certain sorts rather than focusing on explanatory *acts*.[42] On his view, a theory of explanatory acts is more important because it can take into account the important issues of *illocutionary force* and *emphasis*.

Another representative of this third category is Bas Van Fraassen, whose book *The Scientific Image* I have mentioned earlier.[43] In writing about the 'pragmatics of explanation' Van Fraassen actually credits Aristotle's multiple-causal analysis with incorporating just the sort of considerations Achinstein emphasizes. Van Fraassen[44] also draws an important distinction between the *descriptive* and *explanatory* roles played by the statements of a science. What seems to be a single why-question might actually involve a variety of possible explanatory concerns. Or again, one descriptive statement might be the answer to a variety of explanation-questions. In fact, the same statement may play both descriptive and explanatory roles, depending upon context:

> [I]f you ask a scientist to explain something to you, the information he gives you is not different in kind (and does not sound or look different) from the information he gives you when you ask for a description. Similarly in 'ordinary' explanations: the information I adduce to explain the rise in oil prices, is information I would have given you to a battery of requests for description of oil supplies, oil producers, and oil consumption. To call an explanation scientific, is to say nothing about its form or the sort of information adduced, but only that the explanation draws on science to get this information (at least to some extent) and, more importantly, that the criteria of

[41] Glymour mentions Achinstein, Skyrms, Van Fraassen, and ('recently') Putnam. Representatives of his first category are Hempel and Oppenheim: see C. G. Hempel, *Aspects of Scientific Explanation and Other Essays in the Philosophy of Science* (New York, 1965).

[42] P. Achinstein, *The Nature of Explanation* (New York and Oxford, 1983), esp. pp. 5–7 and ch. 3, 'What is Explanation?' Actually Achinstein criticizes Aristotle along with Hempel, but I think his understanding of Aristotle is limited, and at any rate he only mentions him briefly. It may be that Aristotle holds the ontological view of explanations that Achinstein attributes to him (and others, like Hempel), although he is still sensitive to the sort of pragmatic concerns emphasized by Achinstein and others. I shall discuss these topics further in 'Aristotle on Causal Explanation', in Lindsay Judson (ed.), *Essays on Aristotle's* Physics (OUP, forthcoming).

[43] Van Fraassen, *The Scientific Image*. Salmon comments that Van Fraassen 'offers a powerful account of scientific explanation'. See Salmon, *Scientific Explanation*, 8, and also ch. 1, 'Scientific Explanation: Three General Conceptions'.

[44] Van Fraassen, 'The Pragmatics of Explanation', and 'A Re-Examination of Aristotle's Philosophy of Science'.

evaluation of how good an explanation it is, are being applied using a scientific theory.[45]

Because explanation is a description *which answers* a particular why-question, Van Fraassen describes explanation as not simply a two-term relation between theory and fact, but rather a three-term relation between theory, fact, and *context*. In describing context Van Fraassen discusses the logic of why-questions (also mentioned in my Section (*g*) above). In particular, the features of 'relevance' and 'contrast-class' are crucial to determining what is really sought from an explanation.

This extremely minimal sketch of Van Fraassen's view of explanation should still be enough to suggest a viable alternative to Burnyeat's interpretation of how Aristotle views scientific explanation. Burnyeat represents Aristotelian understanding as a fairly simple two-term relation between a proposition or fact and the first principles of the theory it is embedded in/derivable from. But Aristotle's interest in the asymmetries of explanation and in multiple causal accounts should alert us to the fact that explanation is for him a more complex relationship, one involving preparedness to answer why-questions which arise *for* observers and *in contexts*.[46] As I argued above, Aristotle uses evaluations of the *endoxa* in this science to refine why-questions; this creates an expectation about what it will take to 'understand', say, comets or hail. The scientist who truly understands comets has in hand a descriptive theory involving the hot dry exhalation, but this involves 'knowing' more than a mere definition, and it also involves 'understanding' more than simply how to deduce this definition from certain better-known first principles. By virtue of knowing that 'a comet is a combination of the hot dry exhalation with an igniting principle', the scientist also knows the answers to a host of why-questions, so 'understands' and is prepared to explain why comets are rare, why they appear anywhere in the sky, sometimes but not always with a star, more often in dry seasons, etc. Similarly, the person who

[45] Van Fraassen, *The Scientific Image*, 155–6.

[46] This may seem puzzling in the light of Achinstein's criticism of Aristotle for his emphasis on entities rather than illocutionary explanatory acts. I believe that Van Fraassen has better understood the impact of Aristotle's use of multiple forms of explanation; see 'A Re-Examiniation of Aristotle's Philosophy of Science'. But I am also arguing in this paper that Aristotle places more emphasis on 'the pragmatics of explanation' in an actual treatise like the *Meteorology* than in his formal model for science in the *Posterior Analytics*. I return to the topic of Aristotelian pragmatics of explanation in discussing the *Physics* on 'accidental causes' in 'Aristotle on Causal Explanation' (currently in MS draft).

'understands' hail knows not only how to define hail by citing first principles—the exhalations—but can also explain the answers to a variety of why-questions about hail: why does bigger hail fall from clouds nearer the earth, why does it not hail in winter as much as in the autumn, why do hailstones become rounded under certain conditions, etc. And the person who understands earthquakes can explain why they sometimes occur during eclipses of the moon, or are heralded by a dimmed and misty sun.

If this context-dependent account of explanation indeed belongs to Aristotle, then we must recognize a second major limitation of Burnyeat's interpretation. Not only does he draw a sharp distinction between knowledge and understanding, but he also distinguishes processes of understanding and of scientific discovery. Notice how these two are dichotomized in the following passage from Burnyeat's article:

> Teaching in the sense of imparting knowledge to people who did not have it before must normally include the citing of evidence and justification. The path by which the pupil is led to knowledge which is new to him cannot be wholly unconnected with the path by which the teacher won that knowledge in the first place. (I am referring here to the evidential base for a scientific discovery, not to the methods used in the search.)[47]

But as I see it, it does not make good sense to separate the 'evidential base' from 'methods used in the search', as Burnyeat does in this passage.[48] It is certainly true that the evidential base for a scientific definition will involve some allusion to indemonstrable first principles; the scientific inquirer may have to discover these 'self-evident' principles through induction. (Aristotle does begin in the *Meteorology*, roughly, by setting out his first principles, but he does not simply present them with the claim that they are obvious and self-certifying; rather, he argues for them and even surveys *endoxa* concerning them.) Again, a working scientist might stumble on to accounts of particular phenomena, in a process unnecessary to recount in providing subsequent argument for these accounts/definitions.

[47] Burnyeat, 'Aristotle on Understanding Knowledge', 117.

[48] It is instructive to compare my view with Brunschwig's claims that it would be artificial to describe dialectic, as set forth in the *Topics*, as either strictly a method of discovery or a method of justification: 'Mais, sur le plan historique, cette dissociation entre découverte et justification risque, me semble-t-il, d'introduire certaines distorsions dans la lecture des *Topiques*' ('Quelques commentaires', 3).

But, as I have just pointed out, there is more to scientific understanding and explanation than the mere possession of definitions derived from first principles. 'Understanding' involves a correlative ability to explain, i.e. to turn the descriptive statements of this science (those learned in the definitions) to good use in responding to a variety of *questions* which will arise for the scientist as inquirer or teacher. These questions reflect particular presuppositions—about topic, questioner, relevance, contrast-classes, and so on. Imagine two questioners: one, the inquiring scientist seeking to understand hail, and one, the student (or rival scientist) asking Aristotle for the evidential basis of his account of hail. The investigator might ask a question like 'Why does hail fall more often in autumn than in winter?' and then seek an explanation for this *phainomenon* about hail. The student or rival might ask Aristotle exactly the same question, with the expectation of receiving some evidence for his account of hail. And both questioners might well be satisfied by—glean understanding from—the same answer: 'Because hail is caused when the cool moisture in a cloud is compressed into heavy ice by warmth outside the cloud.' So when Aristotle mentions this explanation in his text, what is he doing—recounting his own process of inquiry, or citing the evidential base for his discovery?

In other words, I find it plausible to regard the *Meteorology*, as Aristotle has composed it, as *either* a record of real scientific inquiry and research *or* a listing of the evidence for his proposed theoretical accounts. Furthermore, since teaching science involves conveying explanations to students who ask a variety of sorts of why-questions with particular topics, relevant contrast-classes, etc., this treatise could very well serve as the text in an ancient class on meteorology. In ascribing to Aristotle this emphasis on the pragmatics of explanation, I do not mean to ignore the role of demonstrations and first principles within this (or any) science. For Aristotle, the actual discovery of a middle term, i.e. grasping the cause which connects a phenomenon to the first principles, remains something unanalysable—a job for induction, *nous*, quickness of wit. I have not focused on this process here. Instead, I hope to have shown that in this actual scientific treatise Aristotle' procedure departs from the restrictive ideal set forth in the *Posterior Analytics*, within discussions that could be seen merely as rhetorical flourishes preceding and following upon the crucial business of science (the laying down of demonstrations and definitions). However, these 'flourishes' are themselves methodologically

significant. In his preliminary studies of the *endoxa*, I have argued, Aristotle both focuses his theoretical inquiry by refining why-questions, and directs his search for empirical data by noting failures and missed predictions of earlier scientists. Secondly, by placing emphasis on signs and proofs in the *Meteorology* subsequent to his actual definitions of phenomena, Aristotle invokes further explanations of relevant empirical data in arguing for the truth of his proposed scientific definitions.

Appendix 1
The Saltiness of the Sea

Aristotle takes up his examination of the sea in 2. 3 and focuses mainly on why it is salty, a question he associates with issues about its origins and composition in general. He explores *endoxa*, including Empedocles' claim that the sea is the sweat of the earth, and criticizes them (this one, by saying that it fails to explain by not giving an account of 'sweat'). Finally he moves to clear away these accounts and give his own, immediately alluding to his own assumption of the exhalations (357^b24–6). He considers it 'obvious' that the crucial factor will involve the dry exhalation. Next he notes various 'signs' (*sēmeia*) that the sea's saltiness is due to some admixture. Two in particular are mentioned. In living bodies the least digested matter is salty and bitter; and in combustion ash remains. These are assimilated as both are cases where heat fails to master all its material. He remarks, 'Just as in combustion there is a residue of earth of this kind, so there is in all natural growth and generation, and all exhalation on dry land is such a residue.' Dry land is such a residue, and it comprises most of the dry exhalation, which gets mixed with moist exhalation, turned into rain, and subsequently rained down and deposited in the sea. In crude syllogistic form we would express Aristotle's reasoning to his conclusion like this:

> What includes a residue of the hot dry exhalation is salty.
> The sea includes a residue of the hot dry exhalation.
>
> The sea is salty.

Now, just as in his treatment of earthquakes, so here too Aristotle proceeds to lend support or credibility to his account by putting it to use in explaining associated phenomena (*sumbainonta*). First he explains why 'rains from the south and the first rains of autumn are brackish'. He next accounts for why the sea is warm and for why it never dries up. In addition, within this discussion he refers to a variety of homespun experiments all designed to prove his point, that the sea's saltiness is due to an admixture, one which fails to be present in any vapour formed over the sea. He notes that, first, with wine and other 'tasty liquids' (*khumoi*), any evaporation simply becomes water on condensation.

Next he describes an experiment where a bottle with a wax stopper thrown into the sea lets in only pure fresh water, 'for the earthy substance whose admixture caused the saltiness is separated off as though in a filter'. Furthermore, he cites it as a 'proof' (*tekmērion*) that water's density becomes greater through admixture that eggs will float in very salty water (just as bodies float in the Dead Sea). Each of these simple experiments is cited in an effort to show that the cause of the sea's saltiness is what he says it is, an admixture of the hot dry exhalation. How would they do this? Presumably by showing that in other similar circumstances phenomena occur which are like those features or *sumbainonta* of the sea. For example, the fact that even heavy boats will float in the sea is taken to be another interesting *pathos* concerning the sea, and one which (I think) Aristotle regards as another sign that the sea's saltiness is due to an admixture; as evidence he reminds us that, on a smaller scale, such a mixture serves to float eggs.

Appendix II
An Anomalous Methodological Remark

A very important—though frustratingly brief—methodological remark occurs within Aristotle's discussion of comets, where he seems to present an antirealist position. Here Aristotle suggests that there are varying degrees of testability and, perhaps, also of confirmability within a science like the *Meteorology*. He says,

> We consider that we have given a sufficiently rational explanation of things inaccessible to observation by our senses if we have produced a theory that is possible: and the following seems, on the evidence available, to be the explanation of the phenomena now under consideration. (344^{a}5–8)

Which things exactly are 'inaccessible to observation' (*aphanon tēi aisthēsei*)? The cautionary remark is made only here; it may be that Aristotle intends it to apply primarily to heavenly phenomena, as opposed to those in and above the surface of the earth. At any rate, he does not hesitate to argue that various of his own proposals *are* correct; above I have examined his employment of various 'signs' or 'proofs' (*sēmeia* or *tekmēria*) for the correctness of his causal stories. Since he even makes such a claim for his proposed account of comets, it is hard to see what the impact is of the qualification made in the passage quoted above. I am tempted, though without any further justification, to regard it as an interpolation (and one which is Epicurean in tone).[49]

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[49] See Sedley on Epicurus' views about the equal plausibility of all theories of celestial phenomena which are consistent with the phenomena: 'On Signs', esp. pp. 268–72.

[50] My faculty appointment at the University of Houston from 1986 to 1988 was supported in part by the National Endowment for the Humanities.

IS ARISTOTELIAN HAPPINESS A GOOD LIFE OR THE BEST LIFE?

STEPHEN A. WHITE

IT is a fundamental principle of ancient ethics, shared by nearly all parties, that what people want most of all is to live well, to lead a happy life. As Aristotle puts it, in the most comprehensive account extant, happiness is the ultimate goal or end of human life. It is not simply something that we all should seek, but something that we all do seek, to the extent that we can: all who have the capacity and the opportunity to manage their own lives, Aristotle claims, are in fact engaged in the pursuit of happiness. This purportedly factual thesis also provides the motivational underpinning of any normative proposals to be advanced: to win our commitment to ethical norms, 'happiness ethics' need only show how these norms are the only or the best way for us to achieve our ultimate goal, and our overriding interest in a good life should do the rest. For eudaimonism then, the familiar demand for a justification of moral principles can be met by showing that they are necessary for happiness. However, this emphasis on happiness is not without its price; if our interest in this goal is the sole source of motivation, then there is a risk that an ideal may seem more difficult to attain than we should wish. So if a eudaimonist theory aims to influence the way we lead our lives, it presumably must paint an ideal that lies reasonably within our reach, as the more unlikely it makes our goal seem, the less incentive we may have to adopt its route. The question thus arises for such a theory,

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How successful is our pursuit of happiness? How many of us actually reach our ultimate goal? On Aristotle's account in particular, is happiness a distant ideal accessible only to a few, or does it lie within the reach of most normal human beings? Or more simply, does his account of happiness require the best life, or only a good life?

The question is a crucial one, even apart from any personal interest we may have in our own chances of happiness. Much needless confusion about the nature of Aristotle's ethics can be avoided if we are clear at the outset what sort of ideal he takes happiness to be. On the one hand, his thesis that happiness consists of a life of virtuous activity would seem to point to an ideal only rarely attainable: if a morally good life is a necessary condition for happiness, the ultimate goal must be at least as difficult to attain as virtue is. And if the demands of virtue are as rigorous as many have thought, then the path to happiness must likewise be an arduous one. Moreover, Aristotle's concession that even this is not a sufficient condition for the good life risks making his account even less appealing: at least for the Stoics, virtuous activity *guarantees* happiness. On the other hand, of course, Aristotle may set relatively lax standards for virtue, so that a life of virtuous activity might be fairly easy to lead. And even if virtue cannot ensure a human happiness, still the virtues are exceptionally stable, exceptionally secure against the hazards of external forces, so happiness once attained is not likely to be lost. However, to settle this question and determine how stringent are the standards he sets for the virtuous, we would need to go through his accounts of the several virtues in detail, and that is far too great an undertaking for the present.[1]

Other, more general, considerations would seem to conform with the less demanding picture. Given Aristotle's teleological view of nature, our goal should be readily attainable: if happiness is in fact the natural end or goal of human activity, then it should be fairly widespread, at least in some degree. For although it is natural for there to be some 'unnatural' specimens in any species—some mutants—it would call into question the accuracy of the entire account if most members of the species turned out to lack what is purported to be natural for them. What is natural, as Aristotle is wont to insist, is true at least 'for the most part', so a widespread absence of happiness

[1] I address this larger problem in *Sovereign Virtue: Aristotle on the Relation Between Prosperity and Happiness* (Stanford, 1991).

would suggest that happiness cannot in fact be a natural end of the human species. Hence, for his avowedly naturalistic ethical theory to be consistent with his natural science, either Aristotle would seem obliged to consider most of us happy, or else most of us will turn out to be 'ethical mutants'. Yet here again he may be free to distinguish different levels at which people perform the human functions, and to reserve the title of happiness for the finest performances of those functions. The virtues, after all, are excellences, so if the standard is comparative, as most believed, they require being better than others. Or more generally, if living excellently involves excelling, it must be an exceptional achievement, and happiness will turn out to be a goal rarely, rather than widely, achieved. Similarly, the teleology in craft-skills offers analogous alternatives: one might expect that the art of living generally succeeds in producing a reasonably good life, just as craftsmen generally produce reasonably good products. But crafts require specialization, and few succeed in any art. Worse, if the art of living is a difficult skill, with as many bad practitioners as in the craft of poetry, then few are likely to craft a good life. Finally, there may simply be no connection between Aristotle's natural teleology and his ethical teleology; intentionality, which is present only in the latter, may make the two systems incompatible. However, this seems a radical solution, especially when his naturalism looms so large in his ethical work. So we are back where we began, with no obvious answer to our question.

If these larger questions about virtue and teleology threaten to lead far afield, Aristotle's discussion of happiness itself may prove more helpful. This more direct tack is the one I want to adopt here. While looking at a general theoretical issue, we shall look at one relatively independent of his developed account: how does he analyse the notion of happiness itself? Before presenting his own substantive account of what happiness *consists* in, Aristotle introduces two general conditions that stipulate what *sort* of thing happiness must be: first, it is what is most *teleion* (literally most 'goal-like' or 'end-like'; more commonly 'final', 'complete', or 'perfect'); and second, it is 'self-sufficient'.[2] My

[2] See *NE* 1. 7, $1097^{a}15$–$^{b}21$; cf. *Pol.* 3. 9, $1280^{b}33$–$1281^{a}2$. These conditions are not new with Aristotle: Plato uses them as criteria for 'the good' early in the argument of the *Philebus* (20 D), and again in its final stage (67 A); cf. Aristotle's reference to the Platonists' view at *NE* 10. 3, $1073^{a}29$, and the unargued assumption at *Rhet.* 1. 6, $1362^{b}10$–12. For a thorough discussion of the *Nachleben* of the criteria see T. Irwin, 'Stoic and Aristotelian Conceptions of Happiness', in M. Schofield and G. Striker (eds.), *Norms of Nature* (Cambridge, 1986), esp. pp. 206–8.

question then is how distant an ideal is implied by these general constraints on the sort of thing happiness must be. Do these 'formal conditions', which must be met by any substantive account, by themselves entail either a good life or the best life?

1. Finality and completeness

One advantage in starting from these conditions is that it parallels Aristotle's own entry into the substantive question of what happiness is. Moreover, as formal conditions, these are supposed to be common to every view, whatever its substantive account of happiness; they simply represent conditions of adequacy ostensibly implicit even in conventional views. Whether you find your paradigms of happiness among the rich and famous, among the pious and the pure, or among impoverished intellectuals, Aristotle's approach reasonably assumes that you should be ready to accept some general criteria for what a happy life must be, criteria that impose general constraints on how any notion of the supreme goal should be understood. To be sure, Aristotle's criteria turn out not to be independent of his own account; he exploits them to argue that a life of virtuous activity is happiness because only it satisfies these conditions. The conditions thus serve to bridge the gaps between his account and its rivals, both popular and revisionist ideals. But whether that argument is sound or reasonable is not my concern here. It is crucial first to be clear concerning what exactly these constraints demand.

All agree, Aristotle claims, that happiness is 'the best'. The fundamental problem is how to interpret the superlative, with its peculiarly slippery logic. In particular, does it require the very best life, or can a good life provide 'the best'? Must happiness be the maximally attractive and desirable life anyone could lead? Or is the best possible life compatible with some limits imposed by circumstance and situation, or by talent and training? If it does require the best *possible* circumstances and abilities, the very best anyone could *ever* hope to enjoy, then our ultimate goal will be hopelessly remote. At the other extreme, if happiness is only the best people can do with what they find available, what are its minimal requirements, and how low can someone sink before happiness must be destroyed? Or does the ultimate goal lie somewhere in between, a more moderate ideal based on fulfilling certain major interests and desires? In short, do Aristotle's

formal conditions impose a 'maximalist', a 'minimalist', or a 'modest' conception of happiness? Do they entail a life of complete satisfaction, or merely one of satisficing, of getting by with enough? And do they imply anything about what would be 'enough'?

Aristotle's considered answer to these questions is fairly clear.[3] As we might expect from one who situates virtue in the mean, he endorses a modest conception of happiness. Steering a middle course between a number of conflicting views, he rejects the abnegation of asceticism, while he also scales down the lofty ideals both of popular ambition and of archaic pessimism. He rebuts, for example, the dictum attributed to Solon, 'Call none living happy', because it would make happiness impossible (*NE* 1. 10); and he considers it an advantage of his own account that a good life 'can belong to all who are not crippled with regard to virtue' (1. 9, $1099^{b}18$–20). But though he allows that happiness admits of some disappointment and suffering, and that it does not require the very best circumstances (1. 10, $1100^{b}22$–35), he also denies that happiness is possible in the face of severe deprivation or misfortune (1. 5, $1095^{b}30$–$1096^{a}2$; cf. 7. 13, $1153^{b}17$–22). So if, as he concludes, only 'many great misfortunes' overthrow genuine happiness ($1101^{a}6$–11), then happiness is compatible with less than the best we can imagine. Some unfortunate losses after all are only natural in human life, and a complete lack of concern over great losses would actually betoken the kind of detached insensitivity that Aristotle considers a vice of deficiency in a number of connections.[4] Similarly, when he addresses himself to political theory, the proper aim of which is to foster happiness for society as a whole, he distinguishes three different levels of evaluation (especially *Politics*, 4. 1, 4. 4), and allows for similarly modest requirements: Utopian proposals sketch the best life any could lead (what we would choose 'in our prayers'), but his own discussion centres on the more realistic task of characterizing the best government under given conditions, or simply the best arrangement for given aims. But since he considers the happiness of some part of the citizenry to be the ultimate goal of any form of government or 'constitution', these differences reflect different levels of happiness. For a happy life, therefore, less than the very best is sufficient.

But if Aristotle's considered views are clear enough in outline, are

[3] See T. Irwin, 'Permanent Happiness: Aristotle and Solon', *Oxford Studies in Ancient Philosophy*, 3 (1985), 89–123.

[4] In *NE* see 2. 3, $1104^{b}24$–8; 3. 7, $1115^{b}24$–9; 3. 11, $1119^{a}5$–11 (cf. *EE* 3. 2, $1231^{a}26$–34); 4. 5 (cf. *EE* 3. 3); 8. 6, $1158^{a}1$–10; 9. 4, $1166^{a}7$–29; 9. 10, $1171^{a}6$–8 (cf. *Rhet.* 2. 2, $1379^{b}20$–3).

they *consistent* with the initial constraints set by the way he characterizes the sort of thing happiness is? If his account of happiness as a life of virtuous activity allows for less than the very best life possible, does the analysis of happiness as 'complete and self-sufficient' allow the same? In particular, could a life deprived of major advantages and marred by misfortune meet these formal conditions? Or on the contrary, do these conditions require a maximalist account, as most recent commentators have either claimed or implied? Here is what Aristotle says about the first condition:

(T1) Since our ends are evidently several, and we choose some of them because of another, e.g. wealth and flutes and tools in general [i.e. are chosen because of other things], clearly they are not all *teleion*. But the best [i.e. happiness] is something *teleion*; so if one goal alone is *teleion*, then it would be what we seek, but if there are more, then it is the most *teleion* of them. (*NE* 1. 7, 1097^{a}28–30)

I have avoided translating the decisive term here, because it can easily prejudice our discussion. To begin with, 'perfect' has maximalist connotations all too familiar from Anselmian forms of argument. But even the more common alternatives, 'complete' and 'final', risk prejudging our question. As Grant observed in his note on the passage over a century ago, Aristotle's term suggests both a popular ideal of complete and total fulfilment of all our wishes, and a more philosophical notion of something sought for itself, the final end of all our choices. Thus, on the former translation, the term would imply something comprehensive: the most complete goal is simply the most inclusive one, and attaining it would require attaining all other *teleion* goals. But the latter, which derives from the sense of *telos* as end or goal, has no implications for completeness, although it is compatible with completeness: the most final goal would be that single goal which we consider superior to all others, in that we pursue the others only so far as their pursuit either leads to it, or at least does not interfere with its pursuit. The question, in short, is whether the most *teleion* goal must include all other goals, or only those directly conducive to it. In particular, among the several goals that Aristotle lists, including honour and sight and virtue, must the most *teleion* goal encompass all of them, regardless of their relations among one another, or might it be identical with some of them? The ambiguity persists in the last phrase quoted, 'the most *teleion* of *teleion* goals': is the genitive governed by the superlative constitutive or partitive? If the former, then 'the most

teleion goal' is comprehensive and includes all others, which then count as its components. But if the latter, then the supreme goal is simply the single most final goal among final goals; and while it may encompass some of the others, all that it would have to include are those that serve in its pursuit.

Is there any help to be found in Aristotle's philosophical lexicon? There he distinguishes two basic senses for *teleion* (*Met.* Δ 16), one quantitative and one qualitative; but since he treats each as relativized to the kind of thing in question, we would need to know more about how he understands goals before his entry could be of any use. Thus, although something is quantitatively *teleion* when it has all its parts (1021^{b}12–14), it would beg our question simply to assume that other goals are parts of the most *teleion* goal. Similarly, if something is qualitatively *teleion* when it is an excellent specimen of its kind (^{b}15–23), our question is precisely what *kind* of thing happiness is, what kind of good counts as a *teleion* goal. Further, the formula leaves it unclear whether there may be degrees of excellence, and whether utter perfection or something more modest is required. Finally, although these two senses suggest, respectively, inclusiveness and perfection, we would need some reason to prefer appealing to one rather than to the other to explicate Aristotle's talk about goals. In fact, as a brief remark at the close of this entry suggests, neither seems apposite since the term *teleion* seems to have a somewhat exceptional sense when applied to goals; for he says that a goal is *teleion* when it is 'the last for the sake of which' (τὸ οὗ ἕνεκα ἔσχατον, ^{b}30). Both the reference here to things being 'for the sake of' something else, and the specification expressed by 'the last', clearly invoke a notion of finality. Since happiness is a goal, then, the sense of most *teleion* most likely to apply to it is finality. But to be sure that this less than perspicuous formula does apply to happiness, we should return to the discussion where Aristotle continues his explication of the notion of a most *teleion* goal.

(Γ2) We call something pursued by itself more *teleion* than something pursued because of something else; and we call something never chosen because of something else more *teleion* than things chosen by themselves and because of the other; and something chosen always by itself and never because of anything else we naturally (δὴ) call unconditionally (ἁπλῶς) *teleion*. That is the sort of thing happiness most seems to be. (1. 7, 1097^{a}30–4)[5]

[5] Again the explication is not entirely novel: Aristotle himself attributes a similar argument to Eudoxus, who tried to show that pleasure is 'the good' because we seek it

Clearly, this explication confirms the remark in his lexicon, and tells in favour of finality rather than completeness. Without specifying any objective constraints on what kinds of goals actually are suited to be sought by themselves (and they are considerable), Aristotle here focuses simply on the structure of desire and choice.[6] Appealing to the way in which people subordinate some pursuits of others, he invokes the binary relation of choosing A for B, without expressly limiting either term to items that contribute to happiness: for any goal A, if A is chosen not only for itself but also for B, then B is more *teleion* than A. The initially puzzling notion of degrees being *teleion* thus finds a straightforward explication in terms of the hierarchy of goals. So long as nothing else requires completeness, the highest goal may be some single item or type of thing. To be sure, this supreme goal will generally include some other goals, even some sought also for their own sake, namely those involved in its pursuit. But it certainly would not need to include all final goals, let alone everything worth pursuing at all. Consider Milo, the mighty athlete as famous for his formidable appetite as for his wrestling. He followed a regimen that not only gave him the strength to dominate the games at Olympia, but also satisfied his gargantuan appetite. But if victory was his most final goal, the structure of his choices does not entail that he ate only for victory; indeed, winning was only one of his reasons for eating, as he also enjoyed his training-meals for their own sake. In his case, the unconditional finality of victory entails only that he never sought it because of anything else, not that he sought no other ends for their own sake. Given his tastes, for example, he welcomed the feasts that celebrated his victories; but that is not to say either that he sought victory because of those feasts, or vice versa, but only that the achievement of his most final goal also achieved another final, but subordinate goal. Indeed, if the pursuit of one's final end can be the

without any higher goal (*NE* 10. 2, 1172^{b}20–3; see below on (T6)); and Plato speaks in similar terms of happiness (*Sym.* 205 A), a passage discussed by G. Vlastos, 'Happiness and Virtue in Socrates' Moral Theory', *Proceedings of the Cambridge Philosophical Society*, 210 (1984), 183. In the same article (n. 85) Vlastos also defends translating *καθ' αὑτό* as 'by itself'; Aristotle endorses precisely this explication in his discussion of Plato's views that immediately precedes our texts, 1. 6, 1096^{b}14–19; cf. 10. 7, 1177^{a}33.

[6] The use of verbal adjectives (rather than participles, for example) imports some normative notions; thus Aristotle's account is not merely descriptive, and he would not accept any and every chooser's preferences as data. But he remains silent here about specifics, and his discussion assumes only that there are norms, without yet specifying what they may be.

means to achieve something otherwise onerous, that does not entail that one pursues the former 'because of' the latter; when Milo settled his debts at the tavern by winning a match for the owner, though otherwise he would never have paid his bills, what he enjoyed was the victory, and the repayment was simply an incidental consequence of that. On the other hand, whenever any other pursuits conflicted with his pursuit of victory, Milo was obliged to curtail them, even when he would otherwise have sought them for themselves. Although he had a passion for beef, Milo reluctantly followed his trainer's demand that he eat fowl, so his final goal did not include all that he would have liked. In short, finality and inclusion are compatible and often correspond, but finality by no means entails completeness. Although Milo's final goal required some pursuits and left him free to pursue other goals as well, both independently and subordinately, its finality in and of itself limited those other pursuits to what was compatible with his pursuit of victory.

In contrast with these implications about the pursuit of other goals, the requirement of finality has no implications about how complete the final goal itself may be. Unlike Milo, Philo the wrestling philosopher considered two pursuits superior to all others, but each equal to the other. Uniting two pursuits as his final goal, he never allowed anything else to interfere with his wrestling and philosophical reflection, though he had any number of other pursuits he valued for themselves. The relation of his final goal to his other goals is the same in Philo's case as in Milo's; his final goal simply consists of more than one end. It is worth noting, moreover, that Philo's case seems compatible with (T2), even if there is no suggestion for how to adjudicate between the two components of the final end should they ever compete or conflict with one another. Together they remain Philo's final end, so long as he always chose them for themselves and never because of anything else, even if sometimes he wrestled rather than reflecting. But if the ends of Milo and Philo are equally compatible with (T2), do his subsequent remarks favour one over the other? Speaking of the connection between happiness and other things sought for their own sake, he appears to endorse a tighter connection between finality and inclusiveness that would favour Philo's composite end:

(T3) We choose happiness always because of itself and never because of anything else, but honour and pleasure and intelligence and every

> virtue we choose both because of themselves, since we would choose each of them even if nothing resulted from them, and also for the sake of happiness, in the belief that we shall be happy through them. But nobody chooses happiness for the sake of these things, or generally because of anything else. (1. 7, $1097^{b}1$–6)

The puzzle here centres on how we can choose something for itself when we also choose it for happiness. One explanation, advanced by John Ackrill, is that in choosing honour and our other final ends in the belief that they make us happy, we consider them parts of happiness.[7] On this account, Aristotle would invoke the notion of inclusion to explain his claim that we choose happiness always and only for itself: we choose virtue both for itself and for happiness simply because we believe that virtue is a basic part of happiness, and in choosing the parts of something, we choose them both for themselves and for the whole. In an analogy used by Ackrill, golfers both putt for its own sake and also play golf for its own sake, since putting is simply a part of playing golf; and choosing to play golf for a good holiday involves choosing golf both for itself, and also as a part of the more comprehensive good of a holiday.[8] Thus Aristotle's explication of 'most *teleion*' by parts would imply completeness. Panton, a most well-rounded man, thought there were a number of things worthy of pursuit, and among the things he chose each for itself were virtue, wisdom, pleasure, health, friends, wealth, and honour. His goal was a composite of them all. On the other hand, if this interpretation shows how finality and inclusion are compatible, it does not show that finality entails completeness, let alone that happiness must be the sum of all final ends. Indeed, Aristotle's use of temporal terms throughout his discussion suggests that the passage has a more limited point. By distinguishing different occasions on which we choose our final ends, Aristotle may simply mean to limit happiness to whatever ends one chooses always and only for their own sakes: it is simply those ends—

[7] J. L. Ackrill, 'Aristotle on Eudaimonia', in A. O. Rorty (ed.), *Essays on Aristotle's Ethics* (Berkeley, 1980), 19–21 (first published in *Proceedings of the British Academy* 60 (1974), 339–59). Ackrill also suggests that Aristotle avoided referring to parts explicitly, because that would wrongly suggest that happiness is a mere aggregate. But Aristotle is more explicit elsewhere: cf. *NE* 6. 12, $1144^{a}6$–12 (with Vlastos's comments, 'Happiness and Virtue', n. 28); and *EE* 2. 1, $1219^{b}11$–13, where he explains that people do not 'praise' happiness 'because the other things are praised because of it, either by being referred back to it or by being parts of it' (cf. *NE* 1. 12, $1101^{b}20$–1, $^{b}27$–31). A similar view lies behind Plato's argument that 'the good' is 'mixed', consisting partly of pleasure and partly of reason (*Phileb.* 20–2).

[8] Cf. Ackrill, 'Aristotle on Eudaimonia', 19.

however few they may be—that, whenever we do choose them, we always choose for themselves, whereas all other ends we choose at least sometimes also for the sake of the former. Thus, all that Timon ever chooses *only* for itself is honour, though even that is not something he pursues incessantly; as for all his other ends, he chooses them sometimes for their own sake, but also sometimes for honour. In his case, then, happiness would be living with honour. Does anything commend either interpretation over the other, either Panton's life or Timon's?[9]

In fact, no answer to this question seems available simply on the basis of Aristotle's notion of *teleion*. However, neither account entails maximalism. While both accounts allow more than one end to count as parts of happiness, neither says anything about how many parts are necessary or how many would be sufficient, and both leave us wondering how complete the final good must be. After all, maximalism taken literally would be absurd, and not only because something that includes all the goals anyone ever seeks would be utterly impossible to attain. In Ackrill's analogy, although you choose an iron to get to the green, you don't if you are already there; and even golfers who especially prize putting (who choose it for its own sake) would be happy to play their game with a hole in one. More to the point, while golf may be a constituent part of a good holiday, it is by no means a necessary part, as any number of activities could make up a good holiday. Happiness, like holidays, obviously must consist of some parts; but nothing in the condition of being most *teleion* requires any specific parts, not even all goals sought for their own sake. In fact, all it requires is the almost trivial condition that happiness is a composite consisting of those goals sought for their own sake that are also sought for the sake of happiness. To be sure, Aristotle lists four things that he calls good by themselves and that typically are part of happiness. But nothing he says in (Γ3) requires the presence of them all, or even of any one of them; nor is there any suggestion here that any of them would be sufficient, singly or jointly.[10] In short, this explication says

[9] One tantalizing clue is unfortunately indecisive: the phrase 'through these' (διὰ τούτων, 1097^b5), while it often refers to means (cf. *EE* 1. 2, 1214^b24–7), can also refer to parts: describing deliberation as a search for 'through what' we can accomplish our end, Aristotle mentions 'instruments' such as money, but also their 'use' and the activities in which the end consists (*NE* 3. 3, 1112^b15–31).

[10] In a discussion meant to characterize the kinds of views that win popular assent, Aristotle lists over a dozen 'parts' of happiness (*Rhet.* 1. 5). Several of these parts, most notably health and friends (according to *NE* 8. 1, friends are 'most necessary'), are

nothing precise about how comprehensive the ultimate goal must be. Provided there is more than one end that someone could choose always for itself and never for anything else, the condition of finality by itself would allow any one of them by itself to be happiness. It allows, for example, that people may find happiness in a life devoted to public service, though they may have little time or inclination for study and reflection; but it also allows the contrary, that others find happiness in reflection alone, without subjecting themselves to the burdens and risks of public life. As far as (T3) is concerned, the absence of either of these great goods would not necessarily rule out happiness.[11]

The analogy of golf also shows how even the essential constituents need not be present at all times. No duffer would really be satisfied with hitting holes in one on each and every hole; such good luck would undermine the whole point of the game. And would any enthusiast want to spend an entire holiday golfing? In short, the composite whole consists of a variety of parts; each of them must be present to some degree, but none need be maximized. Take Aristotle's own examples of intrinsic goods: if a life utterly devoid of any honour and respect is scarcely worth living, the ultimate goal hardly requires constant and abundant honour. Or if it must be pleasant, there is no need for us to enjoy ourselves immensely, or at every moment. And while he thinks that the life of the mind offers the finest happiness, he also recognizes that uninterrupted thought lies beyond human capacity (10. 8, $1178^{b}25$–30). The point of these examples is to show that even if the condition of being *teleion* suggests a comprehensive goal that includes

missing from (T3); and neither in the *Rhetoric* nor here does he claim that any one end is necessary. Indeed, only virtue is explicitly included in his own formula for happiness. On the other hand, two of those here enter indirectly, as he argues that intelligence and pleasure are implied by his formula (the former via the *ergon* arguments of 1. 7 and 1. 13, and the latter in 1. 8, $1099^{a}7$–29; 7. 13; and 10. 4–5), though honour is at best only a contingent reward for the virtuous (cf. 1. 5, $1095^{b}22$–31).

[11] Thus (T3) is compatible with the conclusion reached in *NE* 10. 7–8, that although the best happiness is found in a life of reflection, purely practical virtue can yield happiness of the 'second' degree ($1178^{a}7$–9). It is crucial to keep questions about *teleion* and the formal conditions separate from questions about '*teleia* virtue' (1. 7, $1098^{a}16$–18; 1. 10, $1101^{a}14$; 7. 13, $1153^{b}9$–12; 10. 5, $1176^{a}26$–9); all I argue here is that the formal conditions allow a life of either moral virtue or philosophy to qualify as happiness, though they also show how the latter qualifies as better and more final happiness (see n. 43 below). It may be that the latter texts support the view that happiness consists in reflection alone, as some have argued; see R. Heinaman, 'Eudaimonia and Self-Sufficiency in the Nicomachean Ethics', *Phronesis*, 33 (1988), 35–41. But if they do (and I do not think they do, though I cannot argue it here), then these texts would conflict with the formal conditions.

some of a number of major intrinsic goods, it does not require the maximalist extreme, which would be implausible in any case. The first formal condition thus leaves unanswered how much of which goods would be necessary or sufficient for happiness.

If the maximalist model of completeness requires too much, and happiness is not an entirely comprehensive set of everything one might ever choose, does finality imply any lower limits? On a modest conception, happiness could be limited to a narrower range of pursuits, and there would be room for unwanted features as well. In this way, someone who loves putting, but finds it rather tiresome to tee off, still chooses to play the whole game for the sake of one or more of its parts, for putting. Similarly, on a larger scale, many of us choose our careers (the whole), fully expecting the presence of factors we find quite unattractive, because we expect that our career will allow us to attain the goals we hold most dear. Different occupations centre on different pursuits, but most allow us to satisfy a range of interests, from the material needs of health and security, to the wider interests of family, friends, and society. If some people allow their pursuit of their goals to grow to maximalist proportions, still most careers fit a modest conception of happiness. On the other hand, some approach a minimalist conception, with their goals quite narrowly circumscribed, even to the extremes of asceticism. If the pursuit of a single activity is compatible with finality—and it seems that some people do pursue a single goal always and only for its own sake, as identical with happiness—are any other components essential for happiness, even when people restrict their lives to a single pursuit? To take Aristotle's own example, he emphasizes how little we need for a life devoted to philosophical studies, the life he considers the greatest happiness (10. 8, $1178^{b}33$–$1179^{a}9$). But his discussion invokes not only the condition of being *teleion* (10. 7, $1177^{b}1$–15, $^{b}20$, $^{b}24$–6), but also the second condition, self-sufficiency ($^{a}27$–$^{b}1$), to which we should now turn.

2. Self-sufficiency

Aristotle introduces self-sufficiency as implied by finality ($1097^{b}6$–8). Does this second condition establish any limits on the minimum necessary for happiness? For traditional thought, the term certainly pointed towards minimalism and a simple life: Herodotus has Solon counsel Croesus to pare back his desires to what is 'sufficient' (1. 30–2);

Democritus contrasts the self-sufficiency of well-being with the superfluous abundance of the wealthy (frr. 176, 209, 210, 246); the sophist Hippias, whom Plato spoofs as the consummate self-made man, is credited with making self-sufficiency the ultimate goal (*Suda*, s.v.; cf. *H. Min.* 368 B–D) and even Socrates associates sufficiency with a straitened but happy life.[12] Is this the tradition that Aristotle follows? Does he take the second condition to represent not the sufficient satisfaction of the desires people happen to have, but rather the reduction of those desires, on the homely principle that it is easier to satisfy fewer and smaller desires?[13] In connection with the formal conditions, he distinguishes three aspects of self-sufficiency. The first, relatively unimportant for the present question, involves the importance of social concerns for happiness. Without argument at this point, Aristotle simply denies both that people can be happy all by themselves (1097^{b}8–11) and that their happiness requires well-being for all their friends and relatives (^{b}11–14). In short, happiness requires some moderate degree of social context; neither maximalism nor minimalism meets the social implications of self-sufficiency.[14] But if hermits cannot be happy, how little is Aristotle willing to allow? More informative is the second aspect of self-sufficiency, which seems to be offered as an informal definition of the condition:

(T4) We posit the self-sufficient as that which all alone (*μονούμενον*) makes life choice-worthy, and not in need; and that is the sort of thing we think happiness is. (1097^{b}14–16)[15]

[12] See *Gorg.* 492 E 3 (Dodds's note provides further evidence from a range of sources), and 493 C. Epicurus also understands self-sufficiency in ascetic terms (see D.L. 10. 130, and fr. 458 Usener; cf. frr. 200, 202, 466), as do the Stoics, who classify it with 'austerity' (*εὐτέλεια*) as a form of temperance (cf. *SVF* 3. 272).

[13] The quest for self-sufficiency, in this internalized sense of minimizing our desires, is sometimes considered a central and distinctive concern of ancient ethics; see e.g. B. Williams, 'Moral Luck', in *Moral Luck* (Cambridge, 1981), 20, and M. C. Nussbaum, *The Fragility of Goodness* (Cambridge, 1986), 2–4.

[14] An element of social conscience is implicit here: although he will minimize the effect of others' welfare on one's own happiness (*NE* 1. 11), Aristotle here acknowledges that those who flourish in their virtue may still find their lives diminished by the misfortunes of others they cherish in the world around them.

[15] Though the claim is stipulative, neither its sense nor its application to happiness is novel; cf. *Rhet.* 1. 5, 1360^{b}14–15 (a conventional formula for happiness), 1. 7, 1364^{a}5–12, *Pol.* 7. 5, 1326^{b}29, *NE* 10. 6, 1176^{b}5 (the self-sufficient is not 'in need' and rather choice-worthy 'by itself'), and Eustratius, 64. 30–2. in *Gorg.* 492 E (cited above, n. 12), Plato has Socrates observe that Callicles' notion of happiness conflicts with what most people think, that 'those who are not in need are happy'.

The first thing to observe is that two demands are made here, each pointing towards minimalism. The first requires very little, only that one follow a way of life (*bios*) that is choice-worthy. It does not require, for example, that one follow the most choice-worthy way of life, or even an especially choice-worthy life. Rather, the criterion would seem to be satisfied by any whose goals are genuinely choice-worthy, so long as their pursuits and circumstances fare well enough for their lives to remain worth living. After all, life need not be the best we can imagine, or even the best we can manage in our circumstances, for it to remain worth living; and only in extraordinary circumstances does the pursuit of an ultimate goal lead people to sacrifice their lives.[16] In short, a life could be self-sufficient and still be better, even much better, provided there is good reason to continue leading that kind of life, rather than change one's way of life or quit it altogether. Aristotle emphasizes the same point when he limits what makes a life self-sufficient to something 'all alone' (^{b}14). As shown by his use of the same term in the preceding discussion of Platonic views, anything good 'by itself' (*καθ' αὑτά*) is worth pursuing 'all alone', or without regard to any benefits that may result from it (1. 6, 1096^{b}16–19). But his examples there show that thinking and seeing, and even some pleasures and honours, are worth pursuing each on its own, and not just for their consequences; so the reference to 'all alone' in connection with self-sufficiency does not by itself entail a composite, much less a comprehensive, goal.[17] On the other hand, neither does the criterion entail that sight alone, or any of the examples mentioned, would be sufficient to make a whole way of life choice-worthy.[18] All it does assert is that whatever *can* all alone make a whole life choice-worthy is self-sufficient; since sight is not enough to meet the demand, the criterion is compatible with the obvious truth that we are not happy just

[16] Cf. *EE* 1. 5, which like (T2)–(T3) connects the question of what is 'choice-worthy' in life with what we choose 'for its own sake' (1215^{b}28–9), not with the best life we could imagine. Indeed, since the discussion repeatedly assimilates being 'choice-worthy' to the very basic choice of life over death (^{b}18–22, ^{b}26, ^{b}30, ^{b}34, 1216^{a}12–13), Aristotle seems to have only a very modest good in view.

[17] The only other use of *μονούμενον* in the *NE* (10. 2, 1172^{b}28) also comes in connection with Platonic views: this time it joins with 'by itself', in contrast with 'together with another'. The ambiguity of the term is recognized by Heinaman, 'Eudaimonia and Self-Sufficiency', 47 n. 37, although it weakens his argument that happiness is a single kind of activity.

[18] For the strong sense of *βίος* here (1097^{b}15) I follow J. M. Cooper in taking the term to refer to the whole of life; see 'Contemplation and Happiness: A Reconsideration', *Synthese*, 72 (1987), 213 n. 14.

because we can see. The question is rather which, if any, of the several goods sought by themselves is so good that it by itself (or they by themselves) can make life choice-worthy. Indeed, while this criterion does seem to suggest a single good rather than a composite goal, it does not rule out considering a composite 'all alone' in isolation from any *further* goods; as the gloss on Platonic usage illustrates, 'all alone' can be used to isolate any good, even a composite, from its consequences or results, rather than to specify a single type of good.

It is actually the second demand (T4) that has done more to suggest an utterly comprehensive good, as it is often understood to mean 'lacking in nothing' and to require a good so inclusive that it cannot be improved.[19] But in fact all it requires is an absence of need, and of course there is a great difference between not being 'in need' or 'needy' and having everything go as we wish or think best. In general, needs are tied to the notion of harm, rather than either the good or what we desire. To be 'in need' is to lack the conditions prerequisite for any pursuit of the good, and the absence of need is a negative standard that rules out certain basic harms, rather than a positive one requiring the presence of any great goods. In particular, Aristotle's term (ἐνδεής) signifies an absolutely basic need: he uses the same term to characterize our need for such vital necessities as food and drink (3. 11, 1118^{b}8–19, 10. 3, 1173^{b}7–15), while the life of reflection is 'most self-sufficient' because it has the least need for anything beyond these basic necessities (10. 7, 1177^{a}27–^{b}4, 10. 8, 1178^{b}33–79^{a}9; cf. 10. 6, 1176^{b}5). Of course, if the notion of need were itself defined broadly enough to include everything necessary for happiness, then this aspect of self-sufficiency would guarantee happiness. Yet, not only would it be circular to *define* what is itself a criterion for happiness so as to include everything necessary for happiness, but the criterion would still tell us nothing about the comprehensiveness of happiness, since it leaves unanswered just what *is* necessary. All that can safely be said about the absence of need, then, is that it contradicts maximalism. And though it seems to approach minimalism, the preceding requirement of a choice-worthy life maintains a positive standard over and above the mere absence of need, thereby keeping self-sufficiency above that extreme.

But how minimal is this? Does self-sufficiency require only the

[19] The quoted phrase is Ross's translation and has been widely quoted. For further discussion of my remark about need, see D. Wiggins, 'Claims of Need', in T. Honderich (ed.), *Morality and Objectivity* (London, 1985), 149–202, esp. p. 154.

satisfaction of our basic needs together with a willingness to go on living? As Aristotle's following remarks show, more is at stake here than what standard of living is necessary for happiness. The aim of his discussion of self-sufficiency is to characterize the peculiar fact that, while happiness is the best sort of life, it can still be improved. If the discussion at this point has verged on minimalism, Aristotle now goes on to add what is often taken to imply the maximalist view. But does he now go back on his own position by asserting that happiness is something so good that it cannot be made better? Since the translation is problematic, I offer a neutral and ambiguous version:

(T5) Moreover, happiness is of all things most choice-worthy, not counted together; and counted together, clearly, it is more choice-worthy with the least of good things, since the added good becomes a surplus of goods, and the greater good is always more choice-worthy. So happiness is evidently something *teleion* and self-sufficient, since it is the goal of the things we do. (1097^{b}16–21)

The crucial term here is 'counted together', which evidently envisages a list of goods, something like the 'parts' of happiness enumerated in *Rhetoric*, 1. 5.[20] But it is not obvious from this passage how happiness is related to this list. First, what is the logical grammar? Does the participle 'counted together' represent an indicative thesis, or a counterfactual thesis? Which is Aristotle's claim: (1) if we *do* count happiness together with other goods (as we can), then it *is* more choice-worthy; or (2) if we *could* count it together with other goods (but we cannot), then it *would* be more choice-worthy? Further, what sort of operation is involved in 'counting together'? Does it (1) entail treating happiness as a single item, such as honour, or virtue, or pleasure, or does it (2) allow for some sort of composite of other items on the list? The two questions are related, of course. If happiness is a composite, then it would be absurd to count it together with its parts, since that would be to count its parts twice over. In that case, the thesis would be counterfactual. Then, reversing this argument, the orthodox interpretation found in most recent discussions takes the counterfactual to imply that happiness must be a composite.[21] On the other hand, taking

[20] Cf. n. 10 above.

[21] The first proponent of this interpretation I have found is Sir Alexander Grant, in his ground-breaking commentary (London, 1857). He has been followed by legions, among whom the most influential have been J. Burnet, in his commentary (London, 1900); the commentary of R. Gauthier and J. Jolif (Paris, 1959); W. F. R. Hardie, *Aristotle's Ethical Theory* (Oxford, 1968), 22; Ackrill, 'Aristotle on Eudaimonia'; J. M.

the passage indicatively so as to allow for the possibility of counting happiness together with other goods does not entail that it is a single good, as some have claimed.[22] Happiness could consist of a subset of the goods on the list; and unless it includes *everything* good, counting it together with lesser goods does not entail counting its parts twice over, as it could be counted together with other goods that are not included in it. In fact, just as the discussion of the most *teleion* goal allowed a composite good, but also allowed other goods to be added to happiness, so here the grammar is clearly indicative.[23] Similarly, in the following lines, where he describes the consequences of counting together, Aristotle says 'it then becomes [*not* 'would become'] a surplus'; and his mention of 'the added good' implies a possible result, not a logically absurd hypothesis. Moreover, while he claims that adding more goods to happiness would yield a 'surplus' (1097^{b}19), he immediately goes on to say that the resulting greater good *is* more desirable (^{b}20); so all he evidently means is that the sum would be more than the minimum required for happiness, not that it would be excessive or too much.[24] What he evidently wants to exclude then, is not the very possibility of counting happiness together with further goods, but the use of such a procedure to isolate happiness as the best good, since that would involve a crucial misconception of the very sort of thing happiness is. It *can* be counted together with other good things: further goods *can* be added to it and it *can* be made better. But to use this procedure to construct the best good possible, and to look for something so good that nothing ever *could* be added to it, would be to mistake the kind of self-sufficiency possessed by happiness. Happi-

Cooper, *Reason and Human Good in Aristotle* (Cambridge, Mass., 1975), 97–9, and in his review of A. Kenny (below, n. 22), in *Nous*, 15 (1981), 384–5; and Irwin, 'Permanent Happiness', and in the notes to his translation (Indianapolis, 1985), 304, 374, 407–8.

[22] This is A. Kenny's view, first in 'Happiness', *Proceedings of the Aristotelian Society*, 66 (1966), 101, and again in *The Aristotelian Ethics* (Oxford, 1978), 204–5.

[23] The text is not free of problems; but δῆλον ὡς αἱρετωτέρα [sc. ἐστίν] can only be indicative, and unless the variant αἱρετωτέραν is a corruption hiding αἱρετωτέρα ἂν ἦν, a counterfactual is impossible. S. Clark, *Aristotle's Man* (Oxford, 1975), 153–5, reads the passage as indicative, though without argument.

[24] The standard account assumes that ὑπεροχή implies an 'excess, too much'; but that sense would be expressed by ὑπερβολή, whereas this term Aristotle glosses simply as the amount by which the greater of a pair exceeds the lesser (*Phys.* 4. 8, 215^{b}16). Indeed, although I have used the neutral term 'surplus', we might equally well translate the term as 'superiority': in the *ergon* argument that follows (T5) Aristotle describes the 'addition' of virtue to the performance of an *ergon* as a ὑπεροχή, and that can hardly be an 'excess' (cf. the discussion of *Rhet.* 1. 7 that follows).

ness is simply that goal which, chosen always and only for itself, makes life as a whole choice-worthy and not in need.

Other texts bear out this interpretation of the passage. In a survey of the various ways in which to show that one good is better than another, Aristotle observes that 'necessarily, the more goods are a greater good than the one or the fewer, when the one or the fewer are counted together' (*Rhet.* 1. 7, 1363^{b}18–20). As ensured by the proviso that the goods be 'counted together', the claim is not that A&B&C will always be better than D or D&E, but that A&B&C is better than A or A&B. Substituting happiness for A, this principle accords with the indicative reading of (T5). Indeed the passage also shows that there is nothing wrong with having a 'surplus', for Aristotle goes on to explain that 'the more exceed [or 'are superior', *ὑπερέχει*], while the included good is exceeded' (^{b}20–1). In the similar but longer list of commonplaces for deliberative argument discussed in the *Topics*, Aristotle notes the one exception to this principle. After repeating the principle that the more comprehensive good is better than any lesser set of its parts, he admits that 'there is an objection, if in some case one is for the sake of the other, since the sum is not any more choice-worthy than the one [sc. the goal]; so getting healthy and health are not better than health, since we choose to get healthy for the sake of health' (*Top.* 3. 2, 117^{a}16–21). By analogy then, to count happiness together with anything that is simply a means to happiness, or already presupposed by it, would not yield a more choice-worthy whole; and the orthodox interpretation of (T5) is right in objecting to such a move. But that does not mean that happiness cannot be improved by the addition of some *other* goods not presupposed by it; and since the final end does not have to include all choice-worthy ends, there do exist other goods to be added.[25] Finally, in his report of Plato's refutation of one of Eudoxus' arguments about pleasure,[26] Aristotle appears to endorse the orthodox view, that 'the good' (sc. happiness) cannot be made better by the addition of anything good:

(T6) [Eudoxus argues that] when pleasure is added to any other good, such as just or temperate conduct, it makes that good more choice-worthy, and the good is increased by itself. Yet this argument evidently shows that pleasure is one of the goods, and no more than any other, since every good is more choice-worthy together with

[25] For further discussion, see the appendix.
[26] Cf. n. 5 above.

> another good than it is all alone. So by an argument like this Plato too proves that the good is not pleasure: the pleasant life is more choice-worthy together with intelligence than without it, and if the combination is superior, then pleasure is not the good, since the good does not become more choice-worthy when anything is added to it. (*NE* 10. 2, 1172^{b}23–32)

But the conclusion is Plato's, reported in oratio obliqua along with the rest of the argument in the last sentence. First, it contradicts the earlier premiss, reported *in propria persona*, that 'every good' can be made more choice-worthy by adding another good to it (^{b}27–8), a premiss that Aristotle goes on to restate *in propria persona* as a decisive objection to Plato's conclusion: if the good had to be such as Plato's argument supposes, then 'clearly neither would the good be anything else that becomes more choice-worthy in the company of anything that is good by itself' (^{b}32–4).[27] In short, *nothing* would satisfy Plato's demand for a good so good that nothing can make it better, precisely because *every* good can be improved by the addition of further goods. If Eudoxus' use of the premiss shows only that pleasure is good, not that it is 'the good', Plato's use of it shows that even 'the good' can be improved, not that it alone is beyond improvement. Finally, to cap off his objection, Aristotle asks 'What then is the kind of good that we too can share in, since that is the kind of good being sought?' (^{b}34–5). In his own voice, then, Aristotle recommends that we say goodbye to the perfect good that Plato desiderates in his premiss (^{b}31–2),[28] and look instead for something good 'by itself' that lies within our reach, something 'which we can share in' (^{b}34–5). So, on his account, other goods *can* be added to happiness, and the resulting sum *will* be

[27] In contrast with 'the least of goods' added in (T5), here Aristotle restricts the added goods to things good 'by themselves' (*καθ' αὑτό*, ^{b}32–4).

[28] Aristotle's formulation of Plato's premiss is obscure, and, taken strictly, absurd: 'with nothing added to it, the good becomes more choice-worthy'. It is most natural to take the negative as governing the whole sentence: 'the good does not become better when something is added to it'. Alternatively, 'nothing' could be short for 'nothing good', and Plato's argument would be a *reductio*: on Eudoxus' hypothesis that *only* pleasure is the good, adding intelligence to it would not add anything good; but since Eudoxus concedes that the sum *is* better than pleasure alone, intelligence must be something good, and pleasure cannot by itself be the good. In any case, the grammar is indicative, and there is no denial that addition is *possible*. That ^{b}32–5 presents not Aristotle's own position, but an objection to Plato's argument, has also been argued by Heinaman, 'Eudaimonia and Self-Sufficiency', 43–4. But on p. 44 Heinaman mistakes the implication of 1172^{b}27–8, which entails not that 'the chief good (eudaimonia)' can be made better, but only that any *single* good can be made better (note *μονούμενον*, ^{b}28, and the singular in ^{b}33).

something better. Of course, the essential good or goods must remain, as they are still more choice-worthy than anything else. But, just as in (T1)–(T5), here too Aristotle maintains that happiness is the 'most choice-worthy' good not because it cannot be improved, but because it is chosen 'not for anything else' (^{b}20–1) and simply 'by itself' (^{b}23). Happiness, then, is not so good that it cannot be made better, but it is so good that it is always chosen for itself, with or without any other goods.

Aristotle rejects Plato's position partly because the good would end up beyond our reach. More to the point, he bases this rejection on a diagnosis of where Plato's argument goes wrong, and that is precisely because it falls into the trap of maximalism. Plato confuses two distinct goods: (1) that which is 'by itself' more choice-worthy than anything else, and (2) that than which nothing more choice-worthy can be composed.[29] Once this confusion is identified, happiness can be defined in terms of finality as 'most choice-worthy', without leading to maximalism, where either absurdity or inadequacy lies. Suppose that (T5) did require something 'so inclusive that no addition could improve it'.[30] Then, not only would happiness be impossible to attain, but it would contradict obvious facts. Ackrill illustrates the orthodox view with the example of a hearty breakfast of bacon, eggs, and tomatoes: self-sufficiency entails, he claims, that happiness is like a breakfast of all three, since that is better than any single item or any pair on its own.[31] But if nothing *could* be added to the best breakfast, it would have to include kippers, melon, muffins, potatoes, and so on *ad nauseam*; worse, it would also have to include all the eggs and bacon in the world, and so on *ad maiorem nauseam*. The point is not merely frivolous: the problem is that the orthodox approach lacks any basis for objecting that such additions would no longer be good, or even for conceding that they do not add anything good. That would simply beg the question, obscured by this account, of how to determine when the

[29] It may clarify this distinction to formalize it. This can be done with two predicates, 'P' for 'is a part of', and 'C' for 'is more choice-worthy than'. Then maximalism is simply: $(\exists x)(y)([x \neq y] \rightarrow Cxy)$; Aristotle's position is more precise: $(\exists x)(y)(-Pxy \rightarrow Cxy)$. Two points deserve note: (1) the part-relation applies both to proper parts and to identity, so '$-Pxy$' implies '$x \neq y$'; (2) as they stand, neither formula entails that 'x' is single or that it is composite.

[30] See J. Moline, 'Contemplation and the Human Good', *Nous*, 17 (1983), 37; T. Engberg-Pedersen, *Aristotle's Theory of Moral Insight* (Oxford, 1983), 10–11, 15–17, actually embraces the impossibility of happiness as implied by the orthodox view.

[31] Ackrill, 'Aristotle on Eudaimonia', 21.

addition of things good by themselves is in fact good, and when it is not. Further, in addition to this puzzle of why anything good should ever not be good, it would be circular to append a clause limiting any addition of goods to what is sufficient, when it is precisely the criterion of self-sufficiency that is at issue.

An especially subtle approach to this problem has been advanced by Terry Irwin. Using types of goods to characterize happiness, he says that 'the complete good is composed of a *sufficient* number of tokens of *some* determinate types of *each* of the determinable types of good'.[32] Although this formula would be circular for self-sufficiency itself, it does succeed in characterizing a good that can be both attained and improved. But even apart from questions about how many and what types of goods there are (questions that Irwin recognizes), this still requires more than Aristotle does: nowhere does he require some of *every* determinable type.[33] More seriously, it has internal problems of its own. For while it avoids both maximalism and minimalism, it follows the same quantitative approach as they do, and that neglects what Aristotle emphasizes, the principle of unity that can make an aggregate of goods sufficient for happiness, namely, what is most choice-worthy by itself. In particular, the fundamental issue is how the several goods are *related* to one another and to that most final end, not what *number* of tokens is sufficient. Indeed, only that end can provide a method for determining either what would be sufficient, or which further types of tokens would offer improvement and which would not. If one good friend is an essential part of happiness, presumably a second would be also; but Aristotle argues that good friends are few, so there must be a basis for setting some limit to the aggregate. What we need to know, and what Aristotle aims to provide, both with his formal conditions and when he identifies happiness with

[32] Irwin, 'Permanent Happiness', 99 (with my emphases).

[33] Irwin appeals to $1170^{b}17$ and $1172^{b}31$–4; cf. the note on $1097^{b}16$–20 in his translation (above, n. 21). But discussion of (T6) has already shown why the latter should not be used to determine Aristotle's own position. The former is part of Aristotle's explanation why the happy person needs friends; but it presupposes that the happy person considers the friend choice-worthy 'by himself' (a phrase omitted in Irwin's translation), and friends have an exceptional status anyway, since they count among the central goals of the virtuous (cf. the analysis of loving in terms of final ends, as '*wishing* good for the friend *for his sake*'); and virtuous friendships are based on the friends' shared devotion to virtuous principles, so acting for such a friend's sake is usually going to be an instance of virtuous activity. In neither text, then, does Aristotle claim that happiness requires some of everything that is good 'by itself', let alone all types of good.

a life of virtuous activity, is that principle: according to the former, the essential good (which may well be composite) is chosen for itself and on its own makes life as a whole choice-worthy and not in need; and according to the latter, that is virtuous activity. The happy life may include other goods, such as friends and various external advantages, and it may even require some of these other goods. But the formal conditions assert that those additional goods are not part of the essence of happiness, since only what suffices to make a way of life choice-worthy in the first place is essential in the strict sense.[34] In short, while Irwin's formulation is an accurate description of a happy life, it neglects the fundamental point of the formal conditions, and emphasizes instead some of their accidental features. Moreover, it obscures how even what is essential in some lives is not necessary for all lives, as both the formal conditions and the definition allow different kinds of lives to be happy. In some lives, for example, philosophical reflection is an essential part of happiness, while only the virtues of character are essential in others. Both groups have rational virtue as the determinable type of good that is their final end, though different specific choices make different determinate types of goods the essence of happiness. To be sure, Irwin's formula is consistent with this difference, since it allows that '*some* determinate types' of any determinable good are sufficient. But his formula also leaves all differences of type equal and none any better or worse than any other. Contrary to Aristotle's account, the absence of an essential good like reflection would be no worse than the absence of purely incidental goods, such as more kinds of external resources. But for those who lead a reflective life, the absence of the former entails an absence of happiness, whereas the absence of extra resources has no effect on the happiness of anyone, since they are neither necessary nor essential. In short, the fundamental distinction for Aristotle is not between determinate and determinable types of goods, but essential and non-essential types.

What types of goods happiness must include, and how much of each would be enough, are substantive questions that lie beyond the scope of the formal conditions. But these conditions do succeed in characterizing the way in which happiness is both the best good in a life, yet

[34] D. Devereux draws the necessary distinction between the essence of happiness on the one hand, and other goods that may be implied by the essence without being part of the essence; see 'The Essence of Happiness', in D. O'Meara (ed.), *Studies in Aristotle* (Washington, 1981), 247–60, esp. pp. 255–7.

also open to improvement. And they do so by emphasizing the importance of a unifying principle. As Aristotle notes in his final definition, the activity of virtue requires 'enough resources' (1. 10, $1101^{a}14$–16); but it is virtue which sets the standard for what is enough. And as he observes in connection with pleasure, if the virtuous are to find satisfaction in their lives, then they do need some of fortune's favour so that their activities will not be impeded; but he also insists that too much good fortune can itself become an impediment, and virtue is the standard to which he appeals for determining what is 'enough' (7. 13, $1153^{b}16$–25). The good life of the virtuous can thus be made better, though only within limits. If Aristotle can show that those limits are set by what the virtuous choose, then his account will be consistent with the first formal condition of finality; and if he can show how virtuous activity makes life as a whole choice-worthy and not in need, then his account will also satisfy self-sufficiency. On the other hand, neither maximalism nor minimalism is suited to address these questions. First, they both invite the conception of happiness as an aggregate, whether the maximalist's greatest aggregate, or the minimalist's least aggregate; and second, they both neglect the decisive role of the principle that makes any goods choice-worthy and also determines when additional goods cease to be choice-worthy. Rejecting these additive approaches, Aristotle highlights instead the way in which choices are organized in a systematic hierarchy, with some pursuits subordinated to others. On this conception, the goods that provide a life with its principles of organization (namely, the virtues) are on their own the essence of happiness.

3. The best good

Though his discussion is elliptical and even tortuous, Aristotle's formal conditions aim to clarify the logic of 'the best'. Avoiding the paradoxes generated when we look for the very best possible good, his discussion points to a more modest standard for happiness: it does include several goods, but its essence is something that can still be improved. To be sure, this strategy can confuse, but it is borne out by the interpretation found in the *Magna Moralia*, the author of which takes great trouble to specify the way in which the composite good of

happiness can be called the best good.[35] Indeed, that the account found in the *Nicomachean Ethics* was considered problematic is indicated by the more detailed discussion of the same issues in the *Magna Moralia*. Whatever the status of that work, its greater attention to the composite nature of happiness can shed further light on our problems. In particular, it explicitly characterizes happiness in modest terms, as consisting in an organized range of goods that is more choice-worthy than any other goods (singly or jointly) *not included in it*. It thus agrees with the position in the *Nicomachean Ethics* that happiness is a composite good better than anything not included in it, and better than any of its parts taken alone; but it also shows that happiness can be improved by the addition of further goods, provided those are not inconsistent with its essential constituents. First, after introducing the notion of goals and characterizing happiness as 'the *teleion* goal', the author restates the thesis of (T4), saying that happiness is a good such that, 'when it is present, we have no additional need' (1. 2, 1184^{a}8–14). Proceeding then to the crucial question of how happiness is 'the best', he begins by glossing the key term in (T5):

(T7) So how should we look for the best? With it too counted together [with other goods]? But that is absurd: since the best is a *teleion* goal, and the entirely *teleion* goal would seem to be nothing else than happiness, and happiness we put together out of many goods, then if you look for the best by counting it too together [with other goods], it will be better than itself, since it [sc. the new sum] will be better. For

[35] Some still argue that the work comes from Aristotle's own hand; see J. M. Cooper, *American Journal of Philology*, 94 (1973), 327–49. Its date would be irrelevant: if it is an early work of Aristotle's, then the abbreviated remarks of the *NE* would presuppose its fuller discussion; or if it is later, then its expanded account would aim to resolve unclarities in the *NE*. (The *EE*, incidentally, has nothing to say about 'counting together'; rather, its approach to the topic 'the best good', in 1. 8, reaches the notion of a goal sought for itself via a critique of the Platonist 'good itself', similar to *NE* 1. 6.) Although authenticity would help my case, I am inclined to consider it a slightly later Peripatetic compendium. Within a few decades of Aristotle's death serious discussion of his treatises came to a halt, to judge from the little evidence we have; see the references collected by F. H. Sandbach, *Aristotle and the Stoics* (Cambridge, 1985), 1–15, and for the vexed history of Aristotle's texts down to Andronicus' 'edition', see P. Moraux, *Der Aristotelismus bei den Griechen* (Berlin, 1973), i. 3–31, and the further discussion by L. Tarán in his review, *Gnomon*, 53 (1981), 721–36. Serious discussion starts again only with the Andronicean renaissance; subsequent work tends to take the new commentary-format, and tends to use Stoic terminology and doctrine to respond to Stoic views, as in Stobaeus' excerpt of the work attributed to Arius. Finally, the ethical doxography in *MM* 1. 1 stops with Plato, as do Aristotle's several historical sketches; a later work would have more targets to compare and contrast.

> example, given healthy things and health, look for what is the best of them all: health is best; now if it is a best [consisting] of them all, it is also best of itself, and something absurd results. So we should not look for the best this way. (1. 2, 1184^a15–25)[36]

Though the passage is less than perspicuous, good sense can be made of it. The author starts by asserting the composite nature of happiness; but his aim is to rule out looking for happiness as the very best good possible. For granted that it is the best, if we 'count it together' with further goods, then we can make it better. But this improved sum (i.e. happiness and its surplus goods) now will be the best, since it will be better than 'the best' with which we started (i.e. happiness). But since that contradicts the original hypothesis that happiness is 'the best', it is mistaken to look for happiness simply as the greatest aggregate, as that than which nothing can be better. Although happiness is composed of 'many' goods (1184^a19), there is no need to add more goods, and it would be misconceived to require it to contain 'all' goods ($^a22$), as the author illustrates by an analogy with health. As can be seen in this less contentious case, there is no contradiction in saying both that health is the best physical condition and that it can be improved. Rather, when we all recognize what health is, it would be absurd to argue that health must be the best *possible* condition, simply because we call it the 'best condition'. Once you are healthy, the addition of further healthy things may increase your health, but that scarcely shows that you were not healthy in the first place.[37] Similarly, if you are happy, the possibility of making your life

[36] Since the text is highly problematic, not least because of variants in the manuscripts, and it has never been adequately explicated, my translation warrants defence. I follow the readings of Susemihl's Π^1 family throughout, without emendation. In keeping with the sense of 'counting together' found in (T_5) (and *Rhet.* 1363^b19, discussed above), I have added parenthetical supplements to clarify the text. Finally, the genitives can confuse: with *βέλτιον* in $^a21$, *αὑτοῦ* in $^a20$ is obviously comparative; but given the constitutive genitive *ἐκ πολλῶν ἀγαθῶν* in $^a19$, *τούτων πάντων* in $^a22$ should also be constitutive; and as the question 'what is the best of all these' in $^a22$ uses the partitive genitive, so the 'absurd' conclusion ('it is best of itself') in $^a23$–4 should also be partitive, i.e. 'it is the best *part* of itself' (since the sense is comparative, this obviates any need for Spengel's emendation, inspired presumably by *βέλτιον* in $^a21$: if H is the best in a set, it is better than any others in the set). Cf. F. Dirlmeier, *Magna Moralia* (Berlin, 1958), 194 n. 11. 6.

[37] A *reductio* is liable to sound puzzling. But expanded as follows, the analogy gives good sense: health is the best physical condition; but if you insist that health be the *best* health and you add *all* healthy things to it to make a super-health, then health will be 'the best of itself', i.e. basic health will still be the best part of super-health. To see how this corresponds to the text, substitute H ('basic health') and H* ('super-health') for the pronouns in the text: 'H is best; now if H* is a best (made) of all (healthy things), then

better does not entail that you are not happy now as you are. The author's point, in short, is not that happiness cannot be improved, but that it is wrong to require that it be so good that it cannot be improved. Though happiness is a composite, there will also be other goods not essential to it, the addition of which would make happiness better. The moral is thus the one made in connection with (T4) and (T5): happiness is the best, not in the sense that it cannot be made better, but in the sense that it includes the goods essential for a choice-worthy life. Having diagnosed the confusion behind the maximalist approach, the author proceeds to another potential confusion:

(T8) But then we should look for it separate from itself. Or is this also absurd? For happiness is composed of certain goods; but it is absurd to ask whether it is best among the goods of which it is composed, since happiness is not something else apart from these, but is these goods. (1184ª25–9)[38]

Whereas (T7) warns against thinking of happiness simply as the greatest aggregate good, (T8) warns us not to divide up the composite of happiness by looking for the best part among its components and isolating that as what is best 'apart' from the rest. The previous argument envisaged 'the best' as consisting of A&B&C, for example, and then cautioned us against being prized loose from this conception by the possibility of improving it with the addition of D. Now, given the same composite conception of 'the best', the present argument warns us not to infer from the fact that A&B is better than any other subset that A&B is better than A&B&C itself. For although A&B is the best part of happiness, the claim that it is 'the best' *tout court* would imply that 'the best' is better than itself, which is absurd. Although A&B&C is both the best part of A&B&C&D and 'the best' *tout court*, we cannot pare back A&B&C in turn to limit 'the best' to the best part of A&B&C, since that simply lists its components. All those components are necessary and essential, so 'the best' is not anything that

H is also (or still) the best (part) of itself, i.e. of H*.' Aristotle himself expressly allows for degrees of health; see *NE* 10. 3, 1173ª24–5.

[38] The text is again problematic. Since the first sentence is presented as the alternative to the approach rejected in (T7) (if we follow the manuscripts' reading of ἄρα instead of Bekker's ἆρα in ª25), I supply the ellipse of 'we should look for it', and that removes the need to emend αὐτοῦ in ª25; and understanding ª28 on the model of ª24 in (T7) (with a partitive genitive that has comparative implications), I follow the manuscripts (βέλτιστον), not Spengel and Susemihl, who adopt the Aldine text (βέλτιον). For my translation cf. Dirlmeier, *Magna Moralia*, 194 n. 11. 9.

can be 'separate' from any of those parts, but rather is identical with the sum of them as a whole (^{a}28–9).

Each of the first two arguments agrees with the orthodox interpretation in finding some paradox in 'counting happiness together' with other goods. This has led some to interpret the author's refusal to adopt this procedure as a counterfactual thesis: if we *did* look for happiness by counting together, then absurdity would result. However, neither argument here draws either this conclusion or the further conclusion that many recent commentators have: neither concludes that happiness is entirely comprehensive. On the contrary, (T7) seeks to show the absurdity of inferring a maximalist conception; and although (T8) turns on a puzzle about counting parts of happiness, its conclusion none the less explicitly maintains the thesis that the best is a composite of goods. Moreover, in the following argument the author proceeds to count happiness together with other goods in a way that does not generate paradox: he puts 'the best' alongside other goods *not* included in it, and shows how these *can* all be considered together:

(T9) So it would be correct to look for the best in the following way, by judging it together [with other goods], that is, judging happiness itself, which is composed of these goods, against other goods that are not included in it. In this way one would look for the best correctly. ($1184^{a}29$–33)[39]

In the 'syncrisis' or comparison of this third move, the author makes fully explicit his view that happiness does not include everything good. There is nothing wrong with comparing the composite that is happiness with other goods not included in it, he argues, since to say that happiness is the best of goods is only to claim that it is better than any goods *not included* in it; and that does not entail that it cannot be made still better by the addition of further goods. As on the hypothesis envisaged in (T7), if the best consists of A&B&C, then nothing that

[39] If we follow the manuscripts and read ἄρα in ^{a}29, the first sentence is an assertion, rather than a tentative question as in Susemihl's text. I suspect that ἐνόντα in ^{a}32 is used in the technical sense of 'constitutive parts' (cf. M. Woods, *Aristotle's* Eudemian Ethics, *Books I, II, and VIII* (Oxford, 1982), on 1214^{b}14–27); but the weaker sense ('not included in') is sufficient for my interpretation. Cf. Dirlmeier, *Magna Moralia*, 195 n. 11. 11. Aristotle uses this 'comparative' approach also to ask what is 'the best constitution and the best way of life for most cities and most people': working on the assumption that most people do not have any exceptional virtue or education or resources, we should not look for the *very* best life by 'comparing' (συγκρίνουσι) them with those who do and therefore can have the very best life (*Pol.* 4. 11, 1295^{a}25–31).

lacks A&B&C is as good; but that is consistent with A&B&C&D being better. There are other goods, and those may be added so long as the essential composite remains and they do not conflict with it. The best, the argument implies, is attained when a certain threshold (the composite A&B&C) is attained, but any further goods that are consistent with the essential constituents can still be added beyond that threshold. In other words, happiness is set up like a qualifying race rather than a championship race: all those who meet a certain standard qualify for happiness, even though some qualifiers do better than others. The correct way to seek 'the best', then, is to look for the systematic complex of goods that is better than anything inconsistent with it or outside it. But lest this mislead us into looking for the best *single* type of good, the author appends a fourth claim, that happiness is not something 'simple':

(T10) But the best that we now seek is not simple (*ἁπλοῦν*). For example, someone might claim that intelligence is best of all the goods judged together singly. But this is not the way to seek the best good, since we seek the *teleion* good, and intelligence is not *teleion* when it is alone; so it is not the best that we seek, nor the best in that way. (1184^a33–8)[40]

Whereas (T8) warned against limiting 'the best' to its best subset all alone, (T10) now shows why the best single component is not what we are after. Whatever its principal part may be, happiness does not consist in that part all alone since no part is *teleion* by itself. If a single part *were* the object of our search, the author concedes, then we *would* isolate intelligence, since that is the best of all goods when they are compared one by one with one another, each in isolation from all others ($^a34$–5). But as a 'simple' good all on its own, intelligence is not *teleion*, since it is desirable both for itself and also for the sake of happiness, as claimed in (T3). Even if intelligence contributes the most to a happy life, and even if its presence entails the presence of the other virtues (cf. *MM* 1. 34), 'the best' still consists in all of them together, for only the composite is *teleion*, only the composite is a goal for the sake of which we want all other goods, including even the best

[40] For this view of the best single constituent, see *MM* 2. 3, 1199^a25. The context here requires that *ἁπλοῦν* mean 'one type of good by itself'. But the term is ambiguous in the same way as *μονούμενον* is (see n. 17 above): what is 'simple' can be either single as opposed to one among many, or unconditional as opposed to dependent on other conditions (as in (T2)). The common thread is that in either case it is conceived as isolated from anything else, be it other things or other conditions.

single one. According to the criteria mentioned just before (T7), there are two reasons why intelligence by itself is not the best good in the way happiness is: neither is it the goal of 'the other goods' (^{a}5–7), since we do not choose them 'for its sake'; nor does its presence leave us without any 'additional needs', any more than justice by itself would (^{a}8–14), since it does not by itself make life choice-worthy as a whole.

The implications of the formal conditions are best illustrated with Aristotle's own developed account. In the arguments that follow (T1)–(T5), after first establishing the basic principle that happiness consists in a life of virtuous activity, he goes on to show that such activity presupposes a range of other goods, from money and health to family and friends (*NE* 1. 8–11). Happiness thus consists of a composite of virtue and other goods; no element alone would constitute happiness, since none is entirely *teleion* (each is sought also for happiness), or self-sufficient (the exercise of the virtues presupposes some good fortune, while external goods cannot yield happiness in the absence of virtue). But together these several goods can form a composite that is entirely *teleion* and self-sufficient. It is entirely *teleion* because it is chosen entirely for itself; since it consists in the organized pattern of preferences and pursuits that makes up a virtuous life, it not only is what the virtuous want more than anything else, but it also includes the necessary essential goods that they would choose each for its own sake, even without regard to the contribution they each make to happiness ((T1)–(T3)). The composite is also self-sufficient because, first, the virtuous rightly consider their way of life entirely choice-worthy, and second, so long as their basic needs are met, they are able to pursue the goals central to their lives ((T4)). Moreover, they find their way of life the most choice-worthy of all, that is, more choice-worthy than any other way of life, or than anything *else* that is *not* included in it, whether consistent with it or not ((T5) and (T9)). None of this implies that the composite can never be improved. Additional resources or better circumstances could well offer more or better opportunities for the virtuous pursuits they most enjoy, and success in their projects would add to their satisfaction ((T5) and (T7)): the basic difference between liberality and magnificence is one of scale, as greater resources enable the virtuous to perform greater benefits for their fellows. All that Aristotle's formal conditions require here is that the virtuous would not freely or willingly abandon the pursuits which constitute their well-being in return for any other goods. For example, in response to Glaucon's worry that it seems best merely to maintain a

reputation for justice without ever forgoing the profits of covert injustice, (T5) and (T9) claim that the essential components of happiness cannot be improved by the addition of any and every good. For if happiness really is virtuous activity, then acting contrary to virtue would jeopardize the basis for happiness: it would involve abandoning what the virtuous themselves hold most dear (the principles of virtue) for things they consider less good (the material advantages that might accrue from undetected crimes). Since, on Aristotle's account, the value of all other goods is measured against the needs of virtuous activity (*NE* 7. 13, $1153^{b}21$–5), to choose other goods over the principles that constitute their virtue would, by their own estimate, make their lives no longer choice-worthy. Of course, even if there will always be more things that the virtuous want, still they can be happy with less than they would like.[41] Whether this result can be sustained by Aristotle's completed argument remains at this stage an open question. But the discussion does indicate what the condition of self-sufficiency requires, that happiness be a complex good that cannot be improved by addition of any and every good, but only by those consistent with its essential components.

By implication, the discussion of intelligence in (T10) also serves as a warning to those who would isolate the account of intellectual virtue in *NE* 10 from the general account of happiness in *NE* 1. Since no single component can qualify as the *teleion* best, reflection all by itself cannot be identical with happiness, even happiness of the best sort. First, although reflection can surely interfere with practical virtue, as those who consider the nobility of reflection superior to practical ends may very well pay little heed to such strictly 'moral' problems as social justice, it seems unlikely that one could lead a life of reflection without exercising any of the virtues of character, in particular without any temperance and liberality, since those embody right conduct with respect to physical pleasures and material goods. But even if it were possible to do without any practical virtues, or even if it is possible to lead a life of reflection while exercising practical virtues only as

[41] The sovereignty of virtuous principles, on my account, entails that the virtuous have reasons for acting that 'silence' such counter-claims as those imagined by Glaucon in his tale of Gyges and his ring. But virtue need not always silence competing claims, as the difference between 'equity' and strict legal justice suggests. For this notion of reasons that 'silence' competing reasons, see J. McDowell, 'The Role of *Eudaimonia* in Aristotle's Ethics', in A. O. Rorty (ed.), in *Essays on Aristotle's Ethics* (Berkeley, 1980), 370–4; cf. his 'Are Moral Requirements Hypothetical Imperatives?', *Proceedings of the Aristotelian Society*, supp. 52 (1978), 13–29.

instrumental means to the exercise of intellectual virtues, reflection all by itself would not be happiness, since human life has other needs which, if not met, make life as a whole less than choice-worthy.[42] In looking for 'the best', what we are after is not the best single constituent in a good life, but the organized whole that is self-sufficient and most final. On the other hand, (T7)–(T9) show how Aristotle can conclude that the reflective life is a better sort of happiness than the political life of practical virtue: since happiness is a composite that can be improved by the addition of further goods, different composites may each satisfy the criteria for the good life, though some satisfy them better than others do; in the terms of (T5), some sorts of happiness have a 'surplus' of good. What makes a life centred on reflection better and happier than a life of purely practical virtue is that reflection meets the conditions of (T3) and (T5) to a greater degree than any practical virtue does.[43] But since happiness includes a number of necessary goods as well as the essential goods, reflection by itself is not identical with happiness. If the formal conditions are thus neutral on whether any reflection is necessary for happiness, let alone whether it must dominate all other pursuits, they do entail that it is not by itself sufficient for happiness, and that it cannot be the only choice-worthy pursuit in a life. As (T10) affirms, even the dominant element in happiness (the best single part) would not meet the basic criterion of being *teleion*. The best good, or happiness, is rather a composite of goods.

To return to our opening question, how good a life do Aristotle's formal conditions for happiness entail? Since they are satisfied by less than the very best life, they do not require a maximally complete good. And since they require a composite good, no single type of good will prove sufficient. But precisely how much or how little is required by

[42] Although his thorough discussion of self-sufficiency clears up several problems, Heinaman's conclusion ('Eudaimonia and Self-Sufficiency') that happiness consists in the single activity of contemplation does not follow, as it rests on a crucial misreading of (T5) and violates the strictures imposed by (T10); for although (T5) does not require a comprehensive end that includes all goods, neither does it entail a single end. Similarly, the eight problems he poses for the 'comprehensive' view, in his discussion (pp. 47–50) of the indirect evidence that follows *NE* 1. 7, pose problems only for the maximalist end, not a more modest composite.

[43] Aristotle often refers to kinds and degrees of happiness, especially in connection with his 'syncrisis' of philosophy and politics (*NE* 10. 7, 1177^{a}17; 10. 8, 1178^{b}7, ^{b}23, 1179^{a}31–2), but also in connection with virtues of character (1. 10, 1100^{b}22–30; 1. 11, 1101^{a}28–31; 3. 9, 1117^{b}10–14). Moreover, (T5) and (T7)–(T9) show how the formal conditions resolve the tension between *NE* 1 and *NE* 10: reflection satisfies the conditions more fully; cf. Cooper, 'Contemplation and Happiness', esp. p. 208 and n. 17.

the modest conception they sketch is unclear. In principle, they allow for quite low requirements, and yet they are also compatible with high standards. In either case, however, Aristotle's account does yield the kind of general solution appropriate to the inherently imprecise subject of practical affairs. In fact, since the conditions of being *teleion* and self-sufficient are based on what each individual prefers above all, the virtuous themselves are the ultimate arbiters of whether or not they are happy. As the person of virtue is 'like a standard and measure' of what is truly fine and good (*NE* 3. 4, $1113^{a}29$–33), so the virtuous should each find their lives sufficiently complete, given what their several principal pursuits require. If they do consider their needs met and their lives satisfactory, then their pursuit of the goods they choose each for its own sake constitutes a happy life; but if any find themselves deprived of what they consider necessary goods, then their lives fall short of happiness. On the one hand, this enables Aristotle's account to capture the elements of truth behind the minimalist view: what is decisive for happiness is not the maximization of unrelated goods, but the sustained satisfaction found in the pursuit of certain essential goals. On the other hand, his emphasis on the organized hierarchy of pursuits also preserves the maximalist's demand for a composite good, though a less comprehensive one. Consequently, although the formal conditions are neutral on the further question of what constituents are essential for happiness, they do require at least a modestly inclusive good that is organized around some one or more dominant goods. Those who lead a life dominated by the pursuit of the best goods, as the virtuous do, pursue the best life. Compared with any other ways of life that follow different priorities, their life is the best determinable type. But compared with one another, some happy lives are better than others: some fare better in their pursuits, some have more opportunities to do what they value most, and some are simply engaged in better activities. In other words, within the best determinable type, some determinate types are better than other types, and some specimens of each type are better than others. All lead the good life, but only fortunate philosophers lead the very best life. So happiness need not be the best possible, and it is found both in a good life and in the best life, both in a life dominated by virtue, and in a life dominated by reflection in particular. As Aristotle puts it throughout his opening discussion, his subject is 'the good', or 'the human good', as well as 'the best'.

Socrates lived what many have considered the best life: he excelled

in moral virtue, and he practised philosophy whenever he could. His life thus falls under what Aristotle considers the best determinate type of happiness. It also meets the formal conditions: he chose to do precisely what he did, for its own sake rather than for its consequences (indeed, despite some of its consequences), and he had enough of several goods to consider his way of life more choice-worthy than any alternative. Yet even he might have had a better life in a number of ways, including better fortune not only in his physical and material circumstances, but also greater success in his arguments with his fellows, not least in his own trial before the citizens of Athens. But as his example shows—an example not lost on Aristotle—happiness is found in a good life, not only in the very best life.[44]

Appendix

The author of the *Magna Moralia* is not the only one who tries to clarify Aristotle's formal conditions. Several of the ancient commentators also address the crucial passages. Their interpretations, though further removed from Aristotle than the *Magna Moralia*, accord with it in ascribing a 'modest' conception of happiness to Aristotle. To be sure, the reliability of their interpretations cannot be guaranteed, and their views are not entirely uniform. But they do show a consensus about the overall sense of the formal conditions, and their accounts after all stem from traditions that were closer in time to Aristotle's text, and had greater access both to his work and to its context. Moreover, when their authority has been cited to support rival interpretations of (T5) by recent interpreters as well, a full account of Aristotle's views should address their comments.

Despite his late date (early twelfth century), Eustratius (E.) has been the principal bone of contention. Anthony Kenny has claimed to find confirmation in E. for his reading of (T1)–(T5) as identifying happiness 'with a single dominant end, the activity of the highest virtue', namely contemplation.[45] In rebuttal, John Cooper has claimed not only that all the major commentators, E. included, agree with the current orthodoxy in finding an inclusive end in Aristotle, but also that what is 'silly' in E.'s interpretation can be attributed to his Christian apologetics.[46] To be sure, E. does not limit happiness to a single

[44] See Phaedo's judgement, *Phaedo* 58 E, 118 A; and for Socrates' own assessment, recall not only his refusal to save his skin by giving up his chosen way of life (*Ap.* 37 A–38 B; cf. 28 B–29 A, and Vlastos's comments, 'Happiness and Virtue', 186–8), but also his bearing throughout his final hours in the *Phaedo*, even at the very end (117 B–*fin.*).

[45] See Kenny, *Aristotelian Ethics*, 203–5, esp. p. 204 n. 2.

[46] See Cooper's review of Kenny (above, n. 21), esp. pp. 384–5, with nn. 6 and 7; cf. Gauthier and Jolif (above, n. 21), ii/1. 53–4.

kind of activity; as Cooper observes (p. 384), E. himself suggests an inclusive account when, much as Aristotle does in *Rhet.* 1. 5, he lists a wide range of goods that he calls 'parts of happiness'. However, E. does not present an *all*-inclusive or comprehensive account, for he does not assert that all of these 'parts' are necessary for happiness. On the contrary, he first distinguishes those goods that are 'more sovereign' (*κυριώτερα*) from their 'concomitants' (*παρεπόμενα*), including some 'ranked among what is praised, even though the least' (65. 4–6). Putting this distinction to use, he then claims that if any of the concomitants are added to happiness 'when it lacks (*λειπομένῃ*) none of the more sovereign goods in the composite (*σύστασιν*)', then the added good makes happiness more choice-worthy than 'itself', i.e. than it was without the additional good (65. 6–8; cf. (T7)–(T8)).[47] All that is necessary for happiness, therefore, is 'the more sovereign goods', presumably virtuous dispositions and activities, to judge from E.'s examples (65. 1–2). At the very least, not all the concomitants are necessary parts. In particular, E.'s claim that happiness can do without some of the goods that are praised (65. 5) implies that it can do without some of the things that are good 'by themselves', including noble things: for as Aristotle frequently observes, what is praiseworthy is noble.[48] And though Cooper's charge that E.'s examples are 'trivial' is not entirely unwarranted, the examples actually reflect Aristotle's own reference to adding 'the least of goods' (1097^{b}18). Moreover, while E. claims that additional goods improve happiness (he calls it a 'surplus and increase of the good'), he also insists (in the passage quoted by Kenny) that happiness is 'choice-worthy even without the added good' (65. 8–11). As E. explains, something can become *more* choice-worthy only if it is already choice-worthy in the first place. And what determines whether any addition is good, he observes in words that recall both (T5) and (T9), is the already choice-worthy composite of 'more sovereign goods': 'the compared and extra goods (*τὰ συγκριτικὰ καὶ ὑπερθετικά*) are naturally taken in relation to goods that even before are unconditionally (*ἁπλῶς*) choice-worthy' (65. 11–12). Happiness is 'unconditionally' final, according to E., because it 'has need of nothing else beyond itself for its own finality (*τελειότητα*)' (65. 16–17; cf. 64. 28–9 and (T4)): it is choice-worthy solely on its own account, with or without other goods. In short, E. does not endorse either Kenny's *single* 'dominant' end, or an *all*-inclusive end. What his account characterizes is rather a dominant composite that still can be improved: it is inclusive because its parts include the virtues and usually some concomitants; but it is dominant because the 'more sovereign' parts determine what additions are in fact choice-worthy.

[47] Incidentally, while E. glosses Aristotle's participle 'counted together' (1097^{b}17) with an optative with *ἄν* (64. 35), his use of *εἶναι* (without *ἄν*) in the apodosis shows that he understands the passage not as a counterfactual, but as a present general condition.

[48] See *EE* 8. 3, 1248^{b}16–37, *Rhet.* 1. 9, 1366^{a}33–6; cf. *NE* 1. 12, 1101^{b}12–18 and ^{b}31–3. See D. J. Allan, 'The Fine and the Good in the Eudemian Ethics', in P. Moraux and D. Harlfinger (eds.), *Untersuchungen zur Eudemischen Ethik* (Berlin, 1971).

Cooper attributes E.'s interpretation to specifically Christian motives: if E. had followed what Cooper considers the traditional interpretation, he would have said 'that *eudaimonia* is absolutely the best thing, a thing so good that it cannot be bettered by adding anything to it. And this threatens the Christian doctrine of God: only God can be *that* kind of good.'[49] But obviously, if this were not the traditional interpretation, and I have argued that it is not, then there would be no reason for E. to worry about preserving the unique and total perfection of his god. Moreover, while Aquinas does discuss the perfection of God in his commentary on (T1)–(T5), he readily distinguishes this sort of perfection from what is required of happiness.[50] In the first place, he rejects any connection between happiness and the kind of superlative self-sufficiency inherent in his conception of God (the *totale bonum*: 115). Second, he also marks off the perfection of life after death from that sufficient for a good life in this world (113). In his view, all that is required of human happiness is what 'contains all that a human needs (*indiget*) from necessity' (115); and as he emphasizes, this is 'not, however, all that *can* come to a human, so it [sc. happiness] *can* become better when something else is added' (116). To explain his point, Aquinas offers no specifically Christian doctrine, but a sound piece of moral psychology: although happiness can be improved, 'still the person's desire does not remain dissatisfied, since desire regulated by reason—such as the happy person's must be—has no dissatisfaction about things that are not necessary, even though they can be acquired' (116). The satisfaction that the virtuous find in having what they 'need' does not preclude them from finding further satisfaction in additional goods.

The other commentators, whose views have received little close analysis in print, follow E.'s interpretation of Aristotle's account as a 'modest' end.[51] Take Aspasius (A.) first, whose commentary is the earliest extant (early second century AD). To explain (T5), A. first recalls the principle discussed in *Top.* 3. 2, according to which a set of goods is more choice-worthy than any of its proper subsets (16. 34–17. 3; cf. $117^{a}16$–18). But also recalling the objection lodged against this principle by Aristotle himself (17. 3–8; cf. $^{a}18$–21), A.

[49] Cooper, review of Kenny, 385. One commentator who does offer this account is Michael of Ephesus (mid-11th cent.), in his comments on (T6); but his demand for a good that cannot be improved is made for Plato's form of the good ('the good itself'), not for happiness (536. 3–537. 3). In fact Michael's account of the argument in (T6) reads the crucial premisses about perfection as specifically Platonist (note his gloss, at 537. 3–10, on the 'unclarity' of $1172^{b}31$–2; cf. n. 28 above).

[50] *In decem libros Ethicorum Aristotelis ad Nicomachum Expositio*, ed. A. M. Pirotta and P. Martini-S. Gillet (Turin, 1934), 1. 9. 112–16 (my references are to these sections).

[51] Although Cooper, review of Kenny, 391 n. 6, fairly chides Kenny for neglecting the other commentators, the following discussion should show that his own account of their views rests on a conflation of comprehensiveness and inclusiveness. J. Léonard has discussed the commentators briefly, in *Le Bonheur chez Aristote* (Brussels, 1948), app., pp. 188–94; but his discussion rests on his account of 'le bonheur' as contemplation.

explains why it does not always hold when a set includes the goal of its other members. He then exploits this point to interpret 'counting together' so as to rule out counting goals together with further means (17. 8–12). But in so doing, he also allows adding other goods to a whole. So his solution is not to conclude that we cannot add more goods to happiness, but rather that any improvement made by adding them depends on the prior good of happiness to which they contribute. Since the passage is puzzling enough to have received a crux from the Berlin editor, it is worth quoting at length.

> This topos [from *Top.* 3. 2] is criticized [by Aristotle himself, 117ª18–21]: for if this [subset] is the goal of the goods [in the set], then it is *for its sake* that the more choice-worthy become all [together] more choice-worthy than one or two [parts] of the goal;[52] e.g. healthy things *with* health are *not* more choice-worthy than health. So too wealth and health and the rest *with* happiness are *not* more choice-worthy than happiness alone, for when we have happiness, we have all.[53] So this is the topos he uses now: for (1) those goods are said to be counted together with one another that are of the sort that, when all are counted, they are more choice-worthy than the one or the fewer; but (2) those are said not to be counted together that are not [more choice-worthy] when counted with the others, but are more choice-worthy even if they are taken by themselves (*καθ' αὑτά*). And all goals are of the latter sort relative to what produces them (*τὰ ποιητικὰ αὐτῶν*). Thus he claims that happiness is 'most choice-worthy if not counted together', i.e. if it is not suited (*μὴ πεφυκυῖαν*) to be counted together with the other goods, as has been described. But 'if it is counted together', i.e. in a class of the elements that are counted (*ἐν εἴδει τῶν ἀριθμουμένων*), 'it would be more choice-worthy with the least of goods', which is not possible in the case of happiness; therefore, it is 'most choice-worthy of all'. (17. 3–17)

The apparent contradiction in the first sentence between the general claim and the example of health disappears when the contrast is clarified. A. objects to the principle from the *Topics* not because it never applies when goals are involved, but because it applies only sometimes. In both parts of the sentence, he considers a goal in relation to additional goods. But in the first, general

[52] Heylbut marked a crux but also conjectured what would read as follows: 'for if the goal is among the goods, and the other (*τὸ δέ*) is ⟨added⟩ for its sake, then all are ⟨not⟩ more choice-worthy than one or two, ⟨nor are all with the goal⟩ more choice-worthy than the goal.' But this requires two emendations and a supplement of some half dozen words. Yet following the manuscripts (*γίνεται* in 17. 4 instead of a corrector's *προσγίνεται* or Heylbut's *προσγίνηται*), together with the simple adjustment of *τόδε* for *τὸ δέ* in the same line (with a comma after, not before, the word), yields the claim translated above.

[53] 'All' (*πάντα*) here must refer either to all the goods in the antecedently given set that includes happiness (17. 6), or to all the parts or prerequisites of happiness (cf. 16. 8–9, paraphrasing (T4)), but not to the comprehensive 'all goods we could ever have' (which would be *ἅπαντα*).

claim, he explains that when an addition *does* make a composite goal better, it is only because of the goal itself: a larger composite is more choice-worthy than one or two of its parts precisely because any additional parts are chosen for the sake of the goal. Then in the example (the same example as in (T7)) he uses this explanation to show why the principle does not apply when the additional goods are only means to the goal: since healthy things are chosen only because they produce or maintain health, nothing is gained by having additional healthy things once health is present. Hence, in the general case, if A&B is a goal, then A&B is what determines when C is worth adding and when A&B&C is more choice-worthy than A or B alone; and in the example of health, A&B&C is no more choice-worthy than A&B, since C supplies nothing for A&B that is not already supplied. For example, the virtuous would choose more money only if they think it will serve their goals, only for the sake of the happiness they already have; but if they have all the money they need for their goals, then they will not choose any further money because it offers no improvement (as the healthy don't choose to take medicine because it is no good to *them*).

Applying this distinction to Aristotle's claim about 'counting together', A. restricts 'counting together' to goods that follow the *Topics* principle, such that the greater number is always better than any proper subset; sets which include goals, on the other hand, cannot be 'counted together', at least in this special sense of 'counting together' (17. 8–11). Hence, the members of a set can be 'counted together' only if the set does not include the goal of the other members, only if it does not compare a goal with its means (17. 12). But A.'s denial that goals can be 'counted together' with the goods subordinate to them does not entail that a goal cannot be improved by any additional goods, but simply that the addition of extra productive *means* cannot make it more choice-worthy, since that would only add useless goods. It is finality and the special relation a goal has to its means, rather than the purported comprehensiveness of happiness, that rule out 'counting it together' on A.'s interpretation.[54] So, although A. denies that happiness can be 'counted together' with other goods, he construes this term in a special sense that still allows happiness to be improved. Thus, he too interprets (T5) as E. does, as specifying an inclusive end, but not an all-inclusive one.

Writing two or three centuries after E., the paraphrast who is sometimes identified as Heliodorus (H.) presents the same view.[55] Putting the same

[54] *Pace* Cooper, review of Kenny, n. 7. On the grammatical issue, while A. paraphrases Aristotle's words with ἄν (as in E.) and understands this as a counterfactual (17. 15; cf. οὐκ ἔστιν 17. 16), his interpretation of 'counting together' is distinctive. Although he denies that happiness can be 'counted together' with other goods, his interpretation of the term still allows further goods to be *added* to it; but since any additions are good only for the sake of happiness, they do not make happiness any more choice-worthy.

[55] See Gauthier and Jolif (above, n. 21), i/1. 106–7.

emphasis on finality, he contrasts treating happiness as 'the highest' (τὸ ἄκρον) good, with treating it as 'co-ordinate' (σύστοιχος) with other goods (13. 1–5). Since happiness is 'the pinnacle' of all goods—since we choose everything else for its sake—then adding further goods is possible; but just as broadening the base of a pyramid does not raise its pinnacle, so adding further goods to happiness does not make it more choice-worthy. In line with (T9), H. explicitly speaks of adding 'other goods', rather than goods already included in happiness; and in line with (T5) he also speaks of such additions in the indicative (four times in 13. 2–5). Thus, the problem that H. sees here does not stem merely from adding further goods to happiness, but rather from the hierarchical relation among choices. The reason happiness should not be 'counted together' with *any* other goods, included or not, is that it would then be treated as 'co-ordinate' with those other goods, and co-ordinate goods become more choice-worthy in aggregate, whereas nothing is more choice-worthy than happiness. But given H.'s interpretation of 'counting together', his strictures against 'counting together' remains compatible with adding further goods; all he rules out is that the sum will be more choice-worthy. Happiness may be improved by additional goods, although the new and improved composite will still be chosen only for the sake of the original whole, namely happiness itself (13. 4–9). H. as well, then, characterizes happiness both as a goal than which nothing is more choice-worthy and also as a goal to which further goods can be added. The crucial point for him, as for his predecessors, is that any choice of other goods is subordinated to the maintenance of the hierarchically organized composite goal formed by happiness. That composite goal is thus dominant over all other choices or goals.

Commenting on *Top.* 3. 2 early in the third century AD, Alexander explains the basis for H.'s distinction by connecting Aristotle's own discussion in the *Topics* (the exceptions to the rule that any set of goods is better than its proper subsets) with what Aristotle says in 'the first of the Ethics' (247. 9–10).[56] First, the general rule that more goods are better than fewer fails to hold when the fewer goods are 'greater', as justice and intelligence are more choice-worthy than a collection of external goods (246. 21–5). Of course, this exception can be avoided by narrowing the rule to subsets, as Aristotle does. Still, this rule fails to hold, Alexander observes, when one of the goods 'embraced' (περιέχεται) by the set is the goal of the others (246. 28–30). As his example shows, that need not mean that the other goods are 'included in' the goal, but

[56] Provided 'the first' refers to the first *book* of *NE*, not the first *work* written, the wording is compatible with either *NE* or *MM*, but not *EE*, where there is no comparable discussion (the closest parallel is the discussion of things 'choice-worthy for themselves' in 1. 5; see n. 16 above); and the reference to 'embraced' recalls the term in *NE* 1. 2, 1094^b6. In the light of the other evidence collected by Kenny (*Aristotelian Ethics*, 37 n. 4), this would seem not only to confirm his conclusion that Alexander equates 'the Ethics' with *NE*, but also to suggest that he did not consider *EE* a work of Aristotle's.

simply that they are good 'for its sake': health together with 'getting healthy' is no better than health alone, since the latter is only for the sake of the former (246. 30–247. 2; cf. (T7) and Aspasius). Thus, a goal can be 'compared' (*συγκρίνηται*) with what it embraces; but adding it together with the others does not yield a more choice-worthy composite, even though it produces a larger composite, when the others are choice-worthy only for its sake (246. 30–247. 8; cf. (T9)).[57] In short, 'the things embraced by certain things are not counted together with (*συναριθμεῖται*) what embrace them' (247. 8–9). As Cooper observes, Alexander's illustrations suggest that he sees no relevant difference here between simple means (learning as a means to knowing: 247. 2–4) and constituent parts (helping one's family is included in helping one's city, the virtues in happiness: 247. 4–7); in this respect, his interpretation seems to diverge from Aspasius'. But while Cooper is correct to infer that 'in having a whole or an end one already has *its* constituents and *the* means to it',[58] that is still compatible with the possibility of further parts or alternative means. If Alexander warns us not to count the whole with *its* parts, he says nothing against counting it with *additional* parts. In fact, he offers an example that shows that the goal *can* be improved: 'although good fitness embraces health within itself, it does not become more choice-worthy thereby' (247. 7–8). Since 'good fitness' (*εὐεξία*) is simply excellent health (the outstanding physical condition of athletes, not merely the decent condition that counts as health for most of us), health can be improved (cf. *NE* 10. 3, 1173ª24–5). But of course, it can improve only within the limits of what preserves health itself; athletic training aims to avoid injuries or other debilities, since what athletes seek is precisely a better health than ordinary health. Rather than denying that a goal can be added together with *other* goods not included in it, what Alexander emphasizes is that those additions do not make the whole or the end *more choice-worthy*, in the special sense that any improvements are still chosen for the sake of the original goal.

One final text that has not previously been connected with discussion of Aristotle's formal conditions deserves notice here, primarily because it offers an early and authoritative Neoplatonic interpretation of (T5). Plotinus, in his essay on happiness (*Enn.* 1. 4), develops his own contemplative ideal out of a critique of other positions, including Aristotle's. In sections that echo *NE* 1. 7 and 1. 9–10, he denies both that 'the bodily nature should be counted together with a person's being' (1. 4. 5. 9–11), and that 'pleasure should be counted together with the happy life' (1. 4. 5. 14–16; as in Aristotle, the context concerns 'self-sufficiency'). As he concludes, since additional goods such as the pleasures of health 'do not add (*προστίθησι*) anything to being happy', 'it is

[57] Cooper's paraphrase, 'illegitimate to group together' (review of Kenny, 391–2 n. 6), is misleading; what Alexander considers illegitimate is not the combining of a goal with other goods, but the claim that such a combination would be 'more choice-worthy'.

[58] Ibid. (with my emphases).

reasonable to say that they are necessary rather than good. Therefore they should not be counted together with the end; rather the end should be preserved inviolate, whether those things are absent or the contraries present' (1. 4. 6. 27–32). In line with the 'modest' interpretation of (T5), Plotinus restricts the final and self-sufficient end to the essential good that constitutes happiness (cf. 1. 4. 6. 4–13). While he also adopts the Stoic principle that anything else is only 'preferred', and not really 'good'—a principle that Aristotle rejects of course—his understanding of the operation of 'counting together' accords with its use in (T7)–(T8), as well as in (T5). Thus Plotinus, who shows a thorough familiarity with the *Nicomachean Ethics*, interprets 'counting together' in a way that allows the addition of what Aristotle at least would consider further goods. Happiness on this account is the best good, indeed the only good for humans. But since the denial of improvements depends on the Stoic restrictions on what is 'good', happiness can still be improved in the ordinary, non-Stoicizing, sense of improvement that Aristotle accepts.

All commentators maintain the 'modest' interpretation of (T5): happiness should not be sought by counting it together with other goods, but other goods can be added to it. For them, the notion of 'counting together' is a technical one: it involves not simply adding goods to one another, but *ranking* them at the same level. But since they follow Aristotle in conceiving happiness as the pinnacle of a hierarchy of goals, their objections to 'counting together' are that it overlooks the special status of goals: it is the best good not because it cannot be improved (it can), but because any improvements are chosen for its sake (only if they are compatible with it). Hence, Kenny is right when he claims that they understand (T5) as indicative; and Cooper is right when he claims that they reject looking for the highest goal by 'counting together'. But both are wrong to equate the technical term 'counting together' with the simple process of adding more goods. If Kenny is right that happiness is a dominant end, Cooper is also right that it is an inclusive end; but Kenny is wrong in thinking that it is a *single* dominant end, and the phrasing of orthodox interpreters is wrong in suggesting an *all*-inclusive end. For the commentators, as for Aristotle and *Magna Moralia*, happiness is the best good, but it can still be improved.

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ANIMALS IN THE *POETICS*

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ACCORDING to Aristotle, art (*technē*) imitates nature. This celebrated doctrine is not limited to what we call the 'fine arts', or to works of 'art' in any narrow modern sense; and it does not mean that such art-works copy things in the natural order. It means, more generally, that craftsmen adopt means to produce ends; and that in doing so, they follow a pattern found throughout organic nature. The crafts, in their respective domains, do what nature does everywhere. This parallel often provides Aristotle with analogies from the crafts to illuminate the workings of nature.

The *Poetics* is uniquely interesting in that it shows his mind moving, as it were, in the opposite direction. To illuminate a particular craft, that of the poet, he sometimes uses analogies from organic nature. In this paper I explore these analogies for the light they throw upon his conception of the poet's work, and especially upon his defence of epic and drama against the assaults of Plato.[1]

Aristotle's use of zoological models is not, of course, new. Organic thinking pervades Greek philosophy from its earliest stages, and is especially common in Plato.[2] But in Aristotle it assumes a distinctive

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An early version of this paper, entitled 'Organic Models in the *Poetics*', was presented to the Society for Ancient Greek Philosophy at Baltimore on 7 Jan. 1989. I am grateful to the audience for discussion of a pre-circulated draft, and also to participants in philosophy seminars at the University of Western Ontario and Carleton University, where subsequent versions were read.

[1] All references to the *Poetics* are to the Oxford Text of Kassel, with the initial '14' omitted from Bekker page-numbers. The translation used for quotations, unless otherwise noted, is from the edition by S. Halliwell: *The* Poetics *of Aristotle* (Chapel Hill, 1987). The early versions of this paper were written before I had an opportunity to study that edition or the same author's masterly study of the *Poetics*: *Aristotle's* Poetics (Chapel Hill, 1986). I hope that the present version, though differing from Halliwell at certain points, may serve generally to reinforce his views on the relation between fiction, plot-structure, and 'universals' in Aristotle, especially as expounded on pp. 72–3, 98–101, and 105–10 of his 1987 commentary.

[2] Besides *Phaedr.* 264 C–D (to be noticed below), most notably in the *Timaeus*, where the physical world is a cosmic animal, and the *Republic*, where the *polis* is continually

form. He repeatedly draws ideas from his own arsenal of biological concepts and applies them in characteristic fashion to a variety of philosophical issues. Today, when the biological framework of his thinking has been widely appreciated in other areas, I hope that its bearing upon his literary theory will repay a fresh look.

By 'zoological' models I shall mean comparisons of poetic works not only with animals but also with likenesses of animals. *zōion* can mean 'picture' as well as 'animal'; and *zōgraphia* for painting embodies a connection between that art and its living subjects that is absent from our words 'painting', 'picture', or 'portrait'.[3] Just as a picture commonly depicted a live subject, so Aristotle could naturally think of the subject-matter represented by poetry as analogous to a living thing. He could also think of the different types of poetic product as akin to living species, and as needing to be methodically classified, if they were to be scientifically understood.

This is apparent in the very first sentence of the *Poetics* (47^a8–13), where Aristotle approaches poetry, as Northrop Frye has said,

> as a biologist would approach a system of organisms, picking out its genera and species, formulating the broad laws of literary experience, and in short writing as though he believed that there is a totally intelligible structure of knowledge attainable about poetry which is not poetry itself, or the experience of it, but poetics.[4]

But here the title *Poetics* (literally, 'On poetic [craft]'), like our own word 'poetry', is liable to mislead us. These words derive from *poiēsis*, which meant, quite generally, 'making'. Plato had noticed (*Sym.* 205 C–D) the peculiar narrowing of usage that restricted this word to the making of metrical verses. Carpenters and blacksmiths are not 'poets' in this sense, even though they are as 'poetic' in the original broad sense as any wordsmith. But in Aristotle's hands the word

represented as if it were the painting or statue of a living thing. See my 'Image and Reality in Plato's *Republic*', *Archiv für Geschichte der Philosophie*, 47 (1965), 113–31, *passim*.

[3] The connection is especially well marked at *Phaedr.* 275 D, where 'the offspring of *zōgraphia*' are said to 'stand like *zōnta*', but to remain mute if asked a question. They capture the static appearance, but not the powers of speech and movement possessed by live human subjects.

[4] *Anatomy of Criticism* (Princeton, 1957), 14. Biological influence upon Aristotle's distinctions among literary genres will not concern us further here, but it is evident in his sketch of their history. Tragedy, he thinks, *evolved* from earlier poetic forms into its present 'full-grown' state: after 'many changes', it stopped developing once it had attained its own nature (49^a15), having acquired 'parts' not found in its predecessors, even in epic (49^b16–20).

poiēsis, especially as used in conjunction with *mimēsis*, undergoes a further shift, in which, although still limited to verbal 'making', it is sharply dissociated from the use of metre.

This shift is of fundamental importance. If metre is made a defining property of 'poetry', then Plato's *Phaedrus* or the Book of Revelation, for all the beauty of their language, would no more count as 'poetry' than the novels of Agatha Christie or the Canadian Constitution; whereas most of *Hamlet* and all of *Paradise Lost* would qualify as 'poetry', but so equally would the crudest limerick on a lavatory wall. In combating this view of *poiēsis*, Aristotle makes a momentous point. He says that Empedocles, though he used the same metre as Homer, should be called a 'natural philosopher' (*phusiologos*) rather than a 'poet' (47^b17–20). And the works of Herodotus would not cease to be history of a sort (*historia tis*) even if they were put into metrical verse (51^b2–4). Empedocles wrote an account of the physical world, and therefore was primarily what we should call a natural scientist. Herodotus, who recorded the struggle between the Greeks and Persians, was what we should call a historian. On the other hand, Aristotle notices (47^b9–13), there is no single word for what Plato's dialogues have in common with the mimes of Sophron and Xenarchus, realistic sketches dramatizing the events of everyday life.

Aristotle is here remarking on the lack of a word covering representational making (47^b15), whether in verse or in prose. What made Homer or Plato 'poetic' in this sense was not the fact that they were making something in metre, but that they were *making something up*. Plato was not constrained by facts about real-life conversations of the historic Socrates. Homer was not constrained by facts about the Trojan wars as Herodotus was constrained by facts about the Persian wars. When Homer and Plato produced their works, they *invented* conversations and incidents. They used their imaginations. In a word, they composed fiction.[5]

That is what the *Poetics* is primarily about. It deals with those verbal products in which we invent, feign, or make up things that claim no fidelity to fact. These products can be made well or badly, but they are so not by virtue of being true or false to historical or scientific fact, but by virtue of quite different criteria, which Aristotle makes it his main

[5] See esp. the clinching point of Aristotle's argument in ch. 9 (51^b27–9): 'It is clear, then, from what has been said that the poet should be a maker of plot-structures rather than of verses, in so far as his status as poet depends on mimesis, and the object of his mimesis is actions.'

business to explore. Thus, what he says, though mostly stemming from two verse genres, epic and tragedy, has a far wider relevance. Much of it applies to plays, stories, novels, and fiction in general. And the central idea in his defence of *poiēsis* was that Plato had radically misrepresented the nature and purpose of fiction. In broad outline that response will be familiar enough, but I shall try to bring some of its detail into sharper focus.

Plato's charges against the representational poet may be briefly recalled from their famous formulation in *Republic* 10. First, the tragedian and all other representers are 'third from the king and the truth' (597 E 6–8): the poet has only a tenuous grasp of reality or truth. Second, the poet appeals to an inferior side of our nature, to emotions that should not be indulged but held firmly under control. The emotional release afforded by representational poetry is injurious, because it weakens our ability to manage our emotions in the stresses of real life (*Rep.* 604 C–D).

Two points in this attack receive special emphasis, both made through analogies between poetry and painting. First, the poet is reproached for using alluring language: just as painters rely on colour and shape, so poets rely upon metre and melody. The appeal of both is spurious, the former beguiling us with shapes and colours, the latter with words and music, into thinking that they know what they are talking about (601 A–B).

Secondly, the painter represents things in the world of sensible particulars, ordinary beds and tables, and the carpenters that make them (598 A–C). Likewise, the poet represents particular battles and the generals that fight them. Such objects or events are the stuff of ordinary human experience, not the metaphysical realities or universal truths that can be grasped, in abstraction from their particular instances, only by a philosopher. So poets have no genuine knowledge, but only the most superficial grasp of the realities they purport to depict.

Aristotle responds to both these points. The first, he thinks, mistakes what is peripheral for what is essential to poetry. Metrical or lyrical language merely 'garnishes' the poet's work (49^{b}28), but forms no essential part of it. To locate the pleasure of tragedy in its use of language is to miss what Aristotle calls its 'proper' pleasure, i.e. that which derives from its distinctive function. Lyric poetry,[6] though said

[6] Following Halliwell, I use 'lyric poetry' to render *melopoiia* (50^{a}10, ^{b}16). This may remind us that the scope of Aristotle's main discussion in the *Poetics* is narrower as well

to be 'the most important of garnishings' (50^{b}16), is peripheral. The same goes for spectacle (*opsis*), which Aristotle says is 'emotionally powerful but is the least integral of all to the poet's art' (50^{b}16–18).

This last point is made several times, by emphasizing that tragic drama can achieve its impact even without theatrical performance or actors (53^{b}1–7, cf. 50^{b}18–20, 62^{a}11–13, ^{a}17–18): it merely needs to be heard. Aristotle thinks of plays being read, as epics were recited, aloud. This confirms the view of *poiēsis* taken above. For if it is essentially what we call 'fiction', then indeed its central appeal does not depend upon metrical or lyrical language, nor does it require theatrical performance. And for us, even if not for the ancients, the pleasure of fiction can be obtained from reading prose narrative or drama alone in silence.

The answer to Plato's second point is contained in Aristotle's famous contrast between 'poetry' and history. This turns upon a distinction between 'events which have occurred' (*ta genomena*, 51^{a}36–7, ^{b}4) and 'the kind of events which *could* occur, and are possible by the standards of probability or necessity' (51^{a}36–8, ^{b}5). The former are the domain of the historian, the latter of the poet. Aristotle continues: 'It is for this reason that poetry is both more philosophical and more serious than history, since poetry speaks more of universals, history of particulars. A "universal" comprises the *kind* of speech or action which belongs by probability or necessity to a certain *kind* of character' (51^{b}5–9). The distinctions drawn here are not, Aristotle proceeds to argue (51^{b}29–32), invalidated by the fact that dramatists often use actual events and real individuals for their subjects. Historic facts may serve the poetic purpose as well as purely imaginary ones. The depiction of 'the kind of events which *could* occur' can be achieved as well by the appropriate treatment of real events as by inventing fictitious ones. Thus Plato's charge that the poet represents mere particulars misses its target, even in those cases where the events dramatized actually took place.

This passage, and a later one (59^{a}17–29), which draws some further contrasts between the poet and the historian, have often been criticized for their primitive view of history.[7] Much of the criticism is

as wider than 'poetry' in our sense. Aristotle's almost total neglect of the tragic chorus is connected with his view of *poiēsis* as fiction. There is no *general* theory of poetry in the extant *Poetics*. As Halliwell says (edn., p. 110), it is the fictional framework of a poem, not its verbal texture, which marks its poetic nature. See also his discussions of Aristotle's neglect of the chorus (*Aristotle's* Poetics, ch. 8, esp. pp. 249–50; edn., pp. 152–4).

[7] See Lucas's notes on 51^{b}2, 51^{b}8, 59^{a}25 (edn., Oxford, 1968).

well founded, and there is no point in trying to defend Aristotle against all that may be urged against him. But he can still be said to have put his finger on the fundamental difference between history and fiction.[8] The historian's task is to discover and narrate the course of particular events. This task functions as an overriding constraint. It dictates, for example, that the temporal order of events must not be altered; that significant events must not be omitted from the narrative; that events which are not known to have happened, or are known not to have happened, must not be invented; and that statements based upon firm evidence should be distinguished from speculation or gossip.

No such constraints limit the writer of fiction. Even in a play based on real events, fidelity to fact is not of primary importance, though we may prefer the historical record to be respected where it is known for certain. Where the facts are not known, story-tellers are free to invent, supplement, order events, introduce imaginary characters or episodes, to suit their purposes. And in pure fiction they are free to do whatever they please. They can use events and characters in their stories to exhibit whatever general truths about human behaviour they wish to illustrate. The exhibition of such truths is, moreover, the dynamo that powers their narrative. Here, they say, is a certain sort of person placed in a certain sort of situation, and this will show you the kind of thing that is done or experienced by such people when they are placed in such situations (51^{b}8–10).

This is the sense in which *poiēsis* is 'more philosophical' than history. Historians are not committed *ex officio* to exhibiting general truths about human life. Their central task as historians is simply to record events as they have grounds for believing them to have occurred. They are not entitled to trim, adjust, distort, or supplement them, in order to support a generalization or point a moral, or to make the story more interesting.[9]

[8] For a concise appraisal, see M. E. Hubbard, 'Aristotle', in D. A. Russell and M. Winterbottom (eds.), *Ancient Literary Criticism* (Oxford, 1972), 102 n. 1.

[9] My Roman history tutor at Oxford, the incomparable C. E. Stevens, used to say that if his own ingenious version of certain episodes in Cicero's political career were accepted, it 'made the history much more piquant'. So indeed it did; but we should bear in mind that 'history' in English contains an ambiguity (not shared by 'poetry') between historical facts and a historian's account of them. 'Piquancy', even when it is apt as a characterization of the former, is a dubious virtue in the latter. Historical facts may be piquant, or they may be dull as ditch-water, but either way the historian's first duty is to ascertain and report them. Dullness is obviously a defect in a play or novel, but in a history need not be a fault of the same magnitude. Good historical narrative, as *we* tend

Historians are limited, then, by the facts about Alcibiades, whatever those facts were. Their primary purpose is, to that extent, particular, not general. Since they are in no position to generalize until they have established the facts, universals cannot be their starting-point. Story-tellers, by contrast, *start* from general truths to which they are independently committed, and aim to exhibit those truths to their audience or readers. That is why Aristotle says (51^{b}9–10) 'this is what *poiēsis* aims at, assigning names'. He means that it has a generalizing aim, *despite* assigning names to the characters, or perhaps that it assigns names at a *later* stage of composition.[10] The fiction-writer has in mind, at least initially, not individuals but character-types, which the characters are chosen to exemplify. So indeed fiction-writers have often conceived of their task. It is what Aristotle saw as their task, and what he thought that Plato had disastrously ignored, when he damned the poet as 'third from the king and the truth'.

So much for some highlights of Aristotle's response to Plato. It will now be profitable to review some 'zoological' texts.

In his analysis of the 'qualitative parts'[11] of tragedy (ch. 6), Aristotle

to think of it, has to be selective, and no less unified, organized, and focused than good fiction. It is also, preferably, no less readable; and the imaginative flair needed to 'make the past live' may be as important as the sober virtues befitting a judicious scholar. But when writers such as Thucydides (whom Aristotle curiously nowhere mentions by name) impart to their narrative the character of an epic or a tragedy, one may argue that their works embody literary values which are external to their basic task, and which will even be inimical to that task, if they should lead the historian to project a fanciful pattern on to events. Aristotle does not, however, defend his contrast between poetry and history in any such way. His low view of history, particularly of the 'histories' disparaged at 59^{a}21–9, may perhaps be conditioned by that usage of *historia* by which is meant merely a collection of 'raw data' from which generalizations have not yet been distilled. 'Histories' on that level will be limited to the recording of particular facts, since the general laws through which the facts might be explained or interpreted remain as yet unformulated.

[10] Hubbard, Halliwell, and R. Janko (trans. and comm. on *Poetics*, Indianapolis, 1987) take *epitithemenē* (51^{b}10) as concessive. Lucas (p. 121, on 51^{b}10) plausibly argues for a temporal interpretation, on the basis of the directions for plot-construction in ch. 17. See esp. 55^{b}12: *after this* [sc. after mapping out the plot in broad outline], the poet should now supply the names and introduce episodes.

[11] Limitations of space preclude adequate discussion of the relationship between the 'qualitative' (ch. 6) and 'quantitative' (ch. 12) parts of tragedy. But the distinction is, I suspect, zoologically based, the 'qualitative' parts being thought of as corresponding to the constituent materials of an animal, and the 'quantitative' to its organs. *Moria* is used at 47^{a}11 for both quantitative and qualitative parts of poetry, and seems interchangeable with *merē*, also used of both types of 'part' (50^{a}8, 52^{b}14, ^{b}25). In the zoological works, as A. L. Peck has noted (Loeb edn. of *Parts of Animals* (Cambridge, Mass., 1937), 28), *morion* (unlike the English 'part') covers 'uniform' stuffs (blood, bone, etc.) as well as the 'non-uniform' organs made of them. Aristotle could, then, have thought of the 'quantitative'

places enormous stress upon the factor of plot-structure (*muthos*), which he calls 'the first principle (*archē*) and, so to speak, the soul (*psuchē*) of tragedy' (50ª38–9). We should read the organic metaphor here in the light of Aristotle's mature philosophy of mind. The *psuchē* is the 'form' of the living body. It is the distinctive set of capacities in virtue of which an organism is a creature of whatever kind it is. Moreover, it is the attainment of those capacities in the adult member of any species that is the ultimate explanation for its physical structure, for the organs it develops, and for every stage in its growth. Hence, its 'soul' is the ultimate source of every feature that it possesses, which is why Aristotle here conjoins *psuchē* with *archē*.

This conception of the soul finds a clear analogue in tragic plot. The plot is what determines everything that happens in a play, including everything that the characters say and do. It shapes the entire action from start to finish, just as the capacities that a living animal must have, if it is to be whatever kind of creature it is, determine its physical make-up and direct each stage of its growth from conception to maturity.

The plot, then, determines the unfolding of the action, much as the soul determines the course of an animal's growth. It functions, in Aristotelian terms, as a 'final cause', a goal in the dramatist's design. Thus 'the events and the plot-structure' are called 'the goal' (*telos*) of tragedy; and the goal is said to be 'what matters most of all' (50ª22–3, cf. 50ᵇ22–3). *Telos* here does not mean the terminus of the play's action, but is applied to the whole nexus of events in which the tragedy consists.

That nexus must, however, have an ending, a single final outcome, which the events dramatized conspire to bring about. And this outcome will necessarily affect the dramatist's structuring of the events that produce it. For they will be placed where they are so that they may bring about whatever ending the plot dictates, e.g. the downfall of Oedipus through the discovery of his own guilt. The play must unfold so as to lead intelligibly to that final outcome. The earlier events must be represented so that they appear to necessitate, or at

parts of tragedy (*prologos*, *epeisodion*, etc.) as blended together from the 'qualitative' ones in different proportions, just as an animal's organs are variously composed of blood, bone, etc. Strictly, this conception of 'qualitative parts' would not suit the 'part' called *muthos*, to be discussed below. For *muthos*, as 'the soul' of tragedy, is not comparable with any material stuff composing a living thing, but only with its 'form'. But the analogy between plot-structure and 'soul' may not yet have suggested itself to Aristotle when he distinguished broadly between 'qualitative' and 'quantitative' parts.

least render probable, the later ones. But in terms of plot-construction, the shoe is on the other foot: it is the final outcome that may be said to necessitate the events that bring it about.

Thus, governing the composition of a play there is something analogous to what Aristotle elsewhere (*Phys.* 2. 9, *PA* 639^{b}24–640^{a}11, 642^{a}1–642^{b}4) calls 'hypothetical necessity', which controls or directs the development of an animal. If *that* is how things are finally going to turn out, then *this* is what has to happen earlier to secure that result. A must happen, so that B may follow. C must say D so that E will believe F about G, and will therefore commit H, which will lead I to tell J that K has said L. This will ensure that M does N to O, in order that P may do Q to R. And thus S will ask T to say U to V, so that W may persuade X to get Y to kill Z!

In securing the final outcome there is a place in drama, as in organic growth, for the operation of likelihood or necessity, for connections that show the sorts of causal relations that experience would lead us to expect. The impression must be given that later events are the necessary or likely outcome of earlier ones, since a plot will be plausible (*pithanon*, 51^{b}16, 55^{a}30, cf. 60^{a}27–^{b}1) only if it reflects an order of experience that is intelligible to us. But like animal development, dramatic structure is controlled essentially 'from the end', and therefore it is the ending to which we must ultimately look if we wish to understand the construction of a play.

In this way we may understand Aristotle's stress upon the importance of familiar sorts of necessary or probable connection between the events of the play, even where the plot takes a surprising turn (52^{a}1–11, cf. 52^{a}18–21). What is contrary to our normal expectations, what does not form part of a coherent sequence of events, such as unlikely coincidence or the use of *deus ex machina* (54^{b}1–2), will seem artificially contrived, demanded by the requirements of the plot, rather than a credible representation of human life and deliberately chosen action. To that extent the play will fail of its purpose, to enlighten its audience by exhibiting universal truths about human character and conduct.

In ch. 7 Aristotle begins to lay down the principles of plot-construction. He starts by resuming from 49^{b}24–5 his earlier formal definition of tragedy as 'a representation of an action which is complete (*teleias*), whole (*holēs*) and of a certain magnitude' (50^{b}23–5).

Teleios means 'mature', 'fully developed'. The word suggests that the action represented by the play must possess the wholeness of a full-grown animal. 'Whole', which may be meant to explicate *teleios* in

this way, is itself explicated as 'possessing a beginning, middle, and end', notions that are immediately defined in terms of necessary or likely causal relations within a temporally ordered series of events (50^{b}27–31). The plot must embody these relations so that the events of the play will be connected in the way we have just considered.

What exactly does Aristotle mean here by 'beginning, middle and end'? Does he think of the plot-structure in terms of animal morphology, comparing it with the beginning, middle parts, and extremities of an animal's body? Or does he think of it by analogy with the beginning, middle, and ending of an animal's life, i.e. its generation, middle life, and death? On the former interpretation, the thought lies close to that of Plato's *Phaedrus* (264 c), where Socrates says that a speech 'ought to be put together like a living creature, with a body of its own, not headless or footless, but having middle parts and extremities properly in keeping with each other, and with the whole'. This morphological comparison might not, at first sight, seem entirely apt for Aristotle's purpose. For an animal's 'beginning, middle and end' are not, if we take them in this way, related in a manner wholly analogous to the phases of a play's action. The parts of an animal are not temporally ordered and so do not exhibit the causal connection that links successive phases of dramatic action. They do not constitute 'beginning, middle and end', as Aristotle expressly defines them here, in terms of a temporal series. And *teleutē*, used (50^{b}26–7, ^{b}29) for the 'ending' of the action represented by the play, might seem more closely analogous to an animal's death than to an extremity of its body.

More to the point, therefore, might seem a comparison between the phases of the action and the stages of an animal's life, its generation, middle life, and death. Analogously, the action represented by a play must have a birth in time. True, it does not start *ex nihilo* and its antecedents must be revealed in the play if we are to understand it at all. But the beginning must be a fresh point of departure. Similarly, it has a continuous history, from conception onwards, like an animal, each phase being linked with what precedes and follows it, until the ending or 'death' with which it finishes. Any later consequences of the action, though they may be prefigured in the play, lie outside the action itself, like the descendants of an animal. If we are to understand the zoological model in this 'temporal' sense, then the action of a tragedy will be 'complete' or 'whole', not as an animal is 'fully developed' at maturity, but as it is 'finished' at death.

This interpretation of the model, however, must be wrong. For in a

counterpart passage about epic in ch. 23 ($59^{a}17$–21) we find the same comparison used morphologically:

> As for the narrative art of mimesis in spoken verse, it is evident that its plot-structures should have a dramatic coherence, just as in tragedy, and that they should concern an action which is unitary and complete (with beginning, middle (*mesa*) and end (*telos*)), so that, as with a living creature, the single and entire structure may yield the pleasure which belongs to it.

Here Aristotle uses the plural *mesa* for 'middle', clearly meaning (like Socrates in the *Phaedrus*) the middle *parts* of an animal's body; and *telos* for 'end', i.e. 'extremity', replaces *teleutē*.[12] Moreover, the point is made that the epic must, like an animal, produce its 'proper pleasure' through being 'one, whole' ($59^{a}20$). But this must refer to the unity and wholeness of an animal viewed at a given time, rather than the unity and wholeness possessed by an animal's entire life-span. For Aristotle evidently intends a comparison between the pleasure proper to observation of a 'complete' animal and the pleasure proper to the appreciation of epic. Yet no distinctive pleasure is to be gained from surveying an animal's entire life-span; whereas there *is* a distinctive pleasure to be derived from synchronic observation of a unitary, whole animal. The source of this pleasure throws much light upon the pleasure proper to epic and tragedy, as we shall shortly see.

At $50^{b}34$–$51^{a}6$ Aristotle considers the magnitude (*megethos*) of the action to be represented:

> Moreover, any beautiful object, whether a living creature or any other structure of parts, must possess not only ordered arrangement but also an appropriate scale (*megethos*) (for beauty is grounded in both size and order). A creature could not be beautiful if it is either too small—for perception of it is practically instantaneous and so cannot be experienced—or too great, for contemplation of it cannot be a single experience, and it is not possible to derive a sense of unity and wholeness from our perception of it (imagine an animal a thousand miles long). Just, therefore, as a beautiful body or creature must have some size, but one which allows it to be perceived all together (*eusunopton*), so plot-structures should be of a length which can be easily held in the memory (*eumnēmoneuton*).

[12] *Teleutē*, though commonly meaning 'death', is used for the tail-end of a creature at *PA* $685^{a}1$ (cf. *GA*, $720^{b}18$), and for the end of a bone at *PA* $654^{b}24$. At *Metaph.* $1021^{b}28$ Aristotle notes that *teleutē* ('death') is called *telos* ('fulfilment') in a secondary sense, because both are extremes (*eschata*). Here, though *teleutē* means 'death', it shares with *telos* a connection with the idea of 'extremity'.

Here we need to understand the point of comparing our experience of the action represented by a tragedy with the viewing of a tiny or an enormous animal.[13] We should first notice four occurrences in $50^{b}38$–$51^{a}2$ of the rich words *theōria* and *theōrein*. They suggest not just the plain 'seeing' of an animal, or merely 'looking at it', but the scientific study of it.[14] The study of an infinitesimally small animal is said to be 'confused' (*suncheitai*), because the creature is too tiny for its internal complexity to be discerned. Without a microscope, which Aristotle of course lacked, one could not scrutinize it to see how its parts were structured, and how they functioned for the good of the whole. It would therefore lack any recognizable beauty. We could admire neither the individual animal nor its species.

Conversely, an animal one thousand miles long, though its parts could be inspected piecemeal over a long time, could not be observed as a whole simultaneously from any single viewpoint. An overview or conspectus of it would be impossible; and by the time one had examined every part, all sense of its unity and wholeness would be lost.[15] Consequently, one could not understand how its parts were

[13] The text at $50^{b}39$ is uncertain, and there is reason to suspect *tou anaisthētou chronou*, if this is taken to mean 'time that is imperceptible', or 'an imperceptible instant of time' (Janko), or even 'for perception of it is practically instantaneous' (Halliwell). Aristotle says elsewhere (*De sensu*, $448^{a}24$–5, $^{b}18$) that there could be no imperceptible period of time; and one may doubt the explanation of Lucas (p. 113, on $50^{b}38$), that Aristotle believed in a connection between the size of an object and the length of time needed to look at it. Seeing an object is, in Aristotelian terms, an 'activity' (*energeia*), the exercise of a capacity that is as fully realized at any one moment of its use as at any other. In those terms it takes no time at all to see an object, hence no *more* time to look at an elephant than at a flea. There is much to be said for deleting *chronou* with Bonitz, or perhaps for emending the text more radically, to read *suncheitai gar hē theōria tou engus anaisthētou*: 'for the observation of what is nearly imperceptible is confused.' The difficulty with *chronou* is somewhat lessened, however, if *theōria* is taken, as I suggest below, to mean 'study'. And the textual uncertainty casts no doubt upon the reason why the viewing of a minute creature is said to be 'confused'. As Lucas (loc. cit.) says, 'once an object is too small for its parts to be distinguishable, so that their relations cannot be seen, it cannot be beautiful'.

[14] Halliwell's version, quoted above, seems to me not to capture the force of either *theōria* or *suncheitai* at $50^{b}38$, or of *theōrousi* and *ek tēs theōrias* at $51^{a}1$–2. The sense required in $^{b}38$ is that what is barely perceptible is too confused to be *studied*; and in $51^{a}1$–2 that unity and wholeness are lost on the observers *as a result of their studying*, i.e. they cannot see the wood for the trees. My argument below turns partly upon understanding *theōrein* and *theōria* as 'studying', but I sometimes speak of 'viewing' or 'observing', in order to avoid prejudging interpretation in translation. See also n. 15.

[15] Halliwell ('it is not possible to derive a sense of unity and wholeness from our perception of it') misses the suggestion that the viewing process itself actually *destroys* awareness of unity and wholeness. Janko and others ('its unity and wholeness vanish from the observer's view') make *ek tēs theōrias* redundant. G. F. Else (trans. and comm.,

interrelated, or how they worked to enable it to survive and to flourish, in the manner proper to its species.

For Aristotle, however, synoptic viewing of the parts in relation to the whole, and of the whole as consisting of interrelated parts, is essential if we wish to understand a creature and admire its species. That is why a fine animal has to be of a certain magnitude. Likewise with our appreciation of a play. It requires close study of each of its 'parts', analogous to the study of an animal's anatomy. In the former case, when we see the end to which something is a means, we admire the cunning of the artist. In the latter case we admire the cunning of nature. But in both cases, what is fundamental to our appreciation is a grasp of the contribution made by each element to a properly integrated, functioning whole. This implication of the analogy can be best understood from Aristotle's zoological writings, especially the *Parts of Animals*, where functional interdependence is illustrated in detail for a vast number of bodily organs, themselves often possessing huge internal complexity.

Just as, in the composition of an animal, 'nature makes nothing in vain', so each element in a well-constructed plot should be placed where it is for good and sufficient reason. For, as Aristotle will say in ch. 8, when discussing the unity that should characterize the action represented by a tragedy,

> the plot-structure, as the mimesis of action, should be a representation of a unitary and complete action: and its parts, consisting of the events, should be so constructed that the displacement or removal of any one of them will disturb and disjoint the work's wholeness. For anything whose presence or absence has no clear effect cannot be counted an integral part of the whole. (51ª31–5)

Any item that is genuinely part of an organic whole must be essential to it, or it will be a mere accretion. Similarly, every incident in a plot should 'have a clear effect' (*poiei epidēlon*, 51ª35), a discernible bearing upon what happens elsewhere in the action, and thus, ultimately, upon the entire play. Whatever is integral to the play's action must contribute to the whole nexus of events in which its plot consists. Our

Aristotle, Poetics (Ann Arbor, 1967): 'so its unity and wholeness are lost') omits the phrase altogether, as does I. Bywater (*Aristotle on the Art of Poetry* (Oxford, 1909): 'the unity and wholeness of it is lost to the beholder'). Hubbard ('Aristotle', 101) comes closer to the sense needed: 'since our view of it is not simultaneous, so that we lose the sense of its unity and wholeness as we look it over'; but *ek* may, I think, have 'causal' rather than (or alongside) 'temporal' force.

grasp of the whole and our understanding of the parts are thus interrelated, each complementing the other. We must therefore not only study each part in detail but also gain a conspectus of the whole play.

Just as a perceptible structure is needed for a fine animal, to determine an appropriate size for it, so likewise for the action represented by a tragic plot. Just as the animal must have a size enabling it to be viewed all together as a whole, so the plot must have such a length as can be readily remembered (51ª4–6). By this Aristotle means, I suggest, not that we must be able to remember earlier stages of the plot while the later ones are still unfolding before us in the theatre; but that *after* we have seen or read the play, we must be able to recall the action as a whole, so that we may discern and ponder the structural connections through which the plot works. We must retain in the memory a conspectus of the plot as representing a certain nexus of events.[16] For only if we recognize its structure as representing that nexus can we admire the whole play for its illumination of the interplay between character and thought, motivation and action in real life. That is why a synoptic overview of the plot is crucial for our learning from the play, and hence for its proper magnitude.

If that interpretation is correct, it has an important bearing upon what Aristotle means by the pleasure that is 'proper' to tragedy (53ᵇ11). That pleasure is obtained not solely, or even primarily, *while* we are watching the play, but rather in subsequent reflection upon it. For if tragedy's proper pleasure depends upon seeing the parts in relation to the whole, it will not be available to any viewer who has not yet gained a conspectus of the whole. That conspectus is not possible for an audience who are still watching or hearing the play for the first time, especially for the majority who have no prior knowledge of the plot.[17]

[16] At *De mem.* 449ᵇ15–30 Aristotle argues that memory has the past for its object: 'No one would say he was remembering what was present, when it was present.' Cf. 451ª29–30: 'For a person remembers now what he saw or experienced earlier. He does not now remember what he experiences now.' It follows that we could not be said to 'remember' the plot as a whole while still watching or hearing the play. Aristotle notes at *De mem.* 452ª2–4 that 'whatever has some order, as things in mathematics do, is easily remembered (*eumnēmoneuta*)', because of the easy mental passage between successive items. If the same point were applied to a well-ordered dramatic plot, the causal links between its events would help us to remember the play as a whole. Thus, *eumnēmoneuton* at *Poetics* 51ª5–6 would refer to our retrospect upon an entire play, rather than to our experience of it while it was still in progress.

[17] At 51ᵇ19–26 Aristotle notes that although most tragedies of his time were based upon traditional legend, the few that were not so based could please an audience just as much; and that even the traditional stories were familiar only to few of the audience, yet could still please everyone. Lucas (p. 123, on 51ᵇ26) has questioned whether the

The pleasure of pondering the import of a story in its entirety will not be felt by first-time viewers or hearers till they have finished it.[18] And even those who know the story, though they may recognize the ending as foreshadowed in earlier episodes, will hardly be able to achieve a conspectus of the play while they are engrossed in the detail of any particular incident.[19] The pleasure must come, to a significant extent, only *after* watching or reading.

That is why Aristotle, when giving practical guidance concerning a desirable length for the action of a play, can prescind (51ª6–7) from the

traditional stories were, in fact, known 'only to a minority'. But whether or not Aristotle's premiss is true, the direction of his argument is remarkable: a play could give pleasure, he urges, not in spite of prior *knowledge* of the story, but in spite of prior *ignorance* of it. He is not concerned, as a modern critic might be, about prior knowledge 'spoiling it' for the audience or 'giving it away'. His appeal to invented plots (which were common in comedy, 51ᵇ12–15) effectively reinforces his contrast between *poiesis* and history, which stands out more clearly in pure fiction than in plots based upon legend. For in the latter, especially if legend is not differentiated from historical fact, the fiction-writer's aim becomes more readily confused with the historian's. This confusion still bedevils historically based fiction in our own time, as the current furore over Salman Rushdie's novel *The Satanic Verses* well illustrates.

[18] Aristotle's prescriptions for plot-construction, especially his emphasis on surprise (chs. 9, 11) and denouement (ch. 18), seem to cater for an audience ignorant of the story; although even in *Oedipus Tyrannus*, which he so greatly admired, these elements are arguably less crucial than in a modern whodunit (*contra* A. E. Taylor, *Aristotle* (London, 1919; repr. New York, 1955), 111). Agatha Christie's *The Mouse-Trap*, is said to have been ruined for the passenger of a London cab-driver who shouted, as his client walked into the theatre, 'The detective did it!', in revenge for an ungenerous tip. Was *Oedipus Tyrannus* ever ruined for an audience by telling them that? If so, much irony in the play would have been sadly lost upon them. But whether the story of a play is known in advance or not, the unified structure upon which Aristotle insists can be properly appreciated only in retrospect.

[19] Aristotle would not, indeed, deny that a play can, and indeed should, be enjoyed during performance. Elsewhere (*NE* 1175ᵇ12) he notes that it is when we are *not* greatly enjoying something that we are most readily diverted, remarking that people eat sweets in the theatre when the performance is poor. By implication, they enjoy the play most while thoroughly absorbed in it. Since he argues, in the context of that example, that the pleasure proper to an activity is inseparable from, and enhances, our engagement in it, there must, presumably, be pleasure concurrent with the watching or hearing of a good tragedy well performed. But in chs. 13–14, when he discusses plot-structures that will elicit pity and fear, and thereby afford the pleasure 'proper' to tragedy (as distinct from other sorts of pleasure, which need not, or should not, be aimed at, 53ᵇ10–11), his preferred structures include the entire dramatic action from start to finish (esp. 52ᵇ34–53ª2; cf. 51ª9–15). And by way of charging certain dramatists with pandering to audience weakness (53ª33–6), he criticizes their *endings* for giving a pleasure proper to comedy rather than tragedy. This implies, I think, that the pleasure 'proper' to plays in both genres depends crucially upon our response to their final outcome. What happens to the central figure 'in the end' is vital for the total impact of the play. Hence the pleasure taken in an overview of the plot, through appreciating its unity and wholeness, must await a retrospect upon the completed action.

dictates of competitive performance at drama festivals (*tous agōnas*) and the limits of an audience's attention (*tēn aisthēsin*), discounting these as irrelevant to the dramatist's craft as such. The dramatist need not be specially exercised about the length or conditions of performance. What matters is that the action represented can be easily remembered.[20] It should be as large as is consistent with its being 'visible all together' (*sundēlos*, 51ª10–11). The same notion of conspectus reappears later (59ᵇ19–20, cf. *eusunoptos* at 59ª33) in the discussion of epic, where it is required that the beginning and the end be perceivable at one view (*sunorasthai*).[21] The entire plot of the *Odyssey* can be summarized in a single 43-word sentence (55ᵇ17–23). But one cannot achieve such an overview unless and until one has finished reading or hearing the poem.

We must now notice a crucial feature of the pleasure gained from retrospect upon an entire play. This pleasure is distinguishable from the responses of pity or fear felt *while* we are in the theatre or *while* the play is being read.[22] It is a pleasure of the intellect, not a *frisson*, a harrowing, stirring, or venting of the emotions, even though those experiences may contain their own kinds of pleasure. It is a reflective,

[20] For a sequence of actions performed or represented over time, it is arguable that no conspectus will be possible in a single moment. Even a quick retrospect in memory will take *some* length of time, unless a diachronic series can somehow be synchronically reviewed. But this truism does not invalidate Aristotle's demand for conspectus, or annul the distinction between a plot that can be readily remembered and one that cannot.

[21] A speaker at Baltimore helpfully drew attention to *Rhet.* 1409ª24–ᵇ8, which has a similar analogy between visual conspectus and retention in the memory. Aristotle there contrasts two kinds of prose style: 'strung together' (*lexis eiromenē*) and 'periodic'. The latter is easier to follow, (1) because listeners can anticipate the end of each period while it is still being uttered (like runners who can keep going as long as they see the goal ahead of them); and (2) because each period, once its sense is complete, 'has reached some definite conclusion', and is easily remembered. A period has 'a size that can be seen as a whole' (*megethos eusunopton*, ᵇ1). It will stay in the memory (*eumnēmoneutos*, ᵇ5–6) because it has a self-contained structure, with a beginning and an end, and the listener thinks that 'something has been made definite for him'. The same will apply *mutatis mutandis* to the comprehension of a tragic plot. It requires anticipation of the ending while one is following any given episode, but also a memory of each episode after one has followed it, and thus a coherent memory of the entire action *after* the play has been seen or heard. For retention in the memory, see also n. 16 above.

[22] This point is bound up with a reading of 53ᵇ12–13 which cannot be fully elaborated here. I take it from the reference to 'shuddering and pitying' at 53ᵇ5 that Aristotle does indeed require the tragedian to elicit fear and pity in the audience; but it seems to me consistent with that to take 'the pleasure which derives from pity and fear by means of mimesis' (53ᵇ12) to attend their retrospect upon the *whole* play. See nn. 19, 23. A similar retrospect upon epic will be suggested by the comparison of *its* 'proper pleasure' with that derived from the unity and wholeness of an animal (59ª20–1).

scientific, philosophical, dispassionate[23] pleasure, since it attends upon our learning or understanding the 'universals' about human action and suffering that the work has portrayed.

That this *is* the sort of pleasure that Aristotle has in mind as 'proper' to 'poetry' is evidenced, I believe, by a notorious passage in ch. 4, to which we should now look back.[24]

At 48^{b}4–19 'poetic' representation is traced to two natural and distinctively human instincts: (1) to represent (^{b}5–8); and (2) to enjoy representations made by others (^{b}8–9). In connection with (2), Aristotle distinguishes between (*a*) pleasure due to learning from certain likenesses *qua* representations of a familiar original (^{b}15–17), and (*b*) pleasure due to other aspects, such as the workmanship or colour (^{b}17–19). The former sort of pleasure is said to come about, because 'it happens that, in viewing, they come to understand and infer what each thing [is], e.g. that this [person is] that one'.[25] Thus, the enjoyment of looking at the likenesses is bound up with 'understanding' and 'inferring'; and these take place 'in viewing'. But how do the viewers 'understand' or 'infer what each thing is'? What exactly is understood or inferred from what about what? How does 'viewing' enable them to understand? And how are we to understand the schematic example, 'that this [person is] that one'?

The demonstrative pronouns (*houtos ekeinos*), in the received text just translated, are masculine. So it is usually assumed that Aristotle is talking about the pleasure of recognizing a picture as a likeness of a particular human subject: 'that [portrait] is [a likeness of] so-and-so.'[26] But what do we 'understand' or 'learn' from this? As Lucas

[23] This is by no means to say that the pleasure is 'unfeeling' or 'insensitive', or to underrate (let alone to deny) the importance of tragedy's affective impact. On the contrary, the more deeply we have been moved by a play, the more we shall be disposed to reflect upon and learn from it. Our cognitive faculties are engaged *through* our feelings ('through pity and fear'). That point, I suspect (but cannot here argue), is the key to interpreting the text about *katharsis* (49^{b}27–8).

[24] In what follows regarding ch. 4, it will be seen that, with Halliwell (*Aristotle's* Poetics, 79), I favour 'adjusting our interpretation of it, and particularly of the status of its illustration from visual mimesis, in the light of what is to be learnt about poetic mimesis later in the treatise'. Although my way of doing this diverges from his (see n. 37 below), I share his concern to bridge the apparent gap between ch. 4 and later pronouncements, and to dispel any impression that Aristotle's thought in ch. 4 lacks its usual subtlety.

[25] *sumbainei theōrountas manthanein kai sullogizesthai ti hekaston, hoion hoti houtos ekeinos* (48^{b}16–17). I have translated as literally as possible. *Manthanein*, given here as 'coming to understand', can also mean 'realize' or 'learn'; cf. Hubbard, 'Aristotle', 86.

[26] This is the implication of Halliwell's translation, as of eight out of the ten other English versions or commentaries I have consulted. The exceptions are Else and M.

remarks (p. 72, on 48^{b}13), 'When we have learnt what already familiar thing a picture represents we have not learnt much.'[27] Moreover, there need not be any conscious 'inference' in such recognition. When we can simply see straight off whom a portrait depicts, there need be no particular feature from which its subject is consciously inferred, nothing that it would be natural to call an 'inference' (*sullogismos*) at all.[28] Furthermore, it is hard, on this interpretation, to see why Aristotle should associate the relevant pleasure pre-eminently with philosophers (48^{b}13), even though he does (somewhat grudgingly) extend the capacity for learning to others. He gives a prominence to philosophical pleasure in understanding which would seem out of place if he were thinking merely of the delight that anyone may feel in recognizing the subject of a likeness. What he must have in mind, surely, is a pleasure which, although universally shared, is taken especially in the sort of 'viewing' or 'observing' (*theōrein*, 48^{b}11, ^{b}16) in which philosophers engage more than most people. What can this pleasure be?

Fortunately, two other passages contain related lines of thought. The first occurs in the *Rhetoric* (1371^{b}4–9):

> Again, since learning and wondering are pleasant, it follows that such things as acts of representation must be pleasant—for instance painting, sculpture,

Nussbaum (*The Fragility of Goodness*, Cambridge, 1986), both of whom emend the text at 48^{b}17 (see nn. 27 and 35 below). For Halliwell's view, see *Aristotle's* Poetics, p. 72 with n. 36, p. 77 with n. 42, pp. 124, 129–30.

[27] On this point cf. also Else, *Aristotle's* Poetics: *The Argument* (Harvard, 1957), 132, as well as his trans., p. 85 n. 33. But his own interpretation, 'This individual is a So-and-so', is poorly served by emending *houtos ekeinos*, as he proposes, to *houtos ekeino*: it would need *toioutos ekeinos*, as noted by R. G. C. Levens, in his review of the first work, *Journal of Hellenic Studies*, 81 (1961), 189–91, at p. 190. For further difficulties with *houtos ekeinos* see also nn. 36 and 37 below.

[28] Occasionally, to be sure, inference is needed to identify a portrait, though less often when the subject is already familiar than when it is not. At *Top.* 140^{a}21 Aristotle mentions the works of early painters which could not be identified unless there was an inscription on them. In such cases, presumably, a viewer might try to infer the subject's identity from features in the picture that the original was independently known to have possessed or from other evidence not connected with pictorial content. There may indeed be great pleasure in solving such puzzles, and much to be 'learnt' beyond the subject's bare identity. But why should Aristotle have chosen such relatively unusual cases to typify our responses to likenesses (or to 'works of art') in general? And why should he suppose that such inferences will give pleasure only if the subject has been previously seen? May we not enjoy figuring out that a portrait depicts Socrates (say), even without having previously seen him? The subjects of 'early painters' had presumably long been dead by Aristotle's time, so at least in their case the contention of 48^{b}17–19 would be implausible. See also n. 38 below.

poetic composition—and every product of skilful representation; this latter even if the object represented is not pleasant: for it is not the object itself which here gives delight; but there is an inference that this is that (*alla sullogismos esti hoti touto ekeino*), with the result that one learns something. (Oxford trans., adapted)

Here we find the same emphasis upon learning or understanding, the same connection of learning with inference, and a similar schematic example to illustrate the observation that even where the represented object is not pleasant the representation will still give pleasure because it results in learning. But there is one noteworthy difference between this text and the *Poetics* one. The demonstrative pronouns here are neuter, so that Aristotle need not be thinking, at least primarily, and perhaps not at all, of human examples. We shall return to this point shortly.

Our second passage comes from the *Parts of Animals* ($645^{a}7$–17):

For even in animals that give no pleasure as regards sense-perception (*pros aisthēsin*), nevertheless in terms of scientific study (*pros theōrian*) nature who fashioned them provides unbounded pleasure for those who can recognize causes (*aitiai*) and are by nature philosophers. Indeed, it would be paradoxical and illogical, if when studying their likenesses we enjoy doing so because we are at the same time studying the skill that fashioned those likenesses, such as painting and sculpture, yet we do not love still more the study of the originals constituted by nature, at least when we can discern their causes. (trans. D. Balme, *Aristotle's* De Partibus Animalium *I and* De Generatione Animalium *I*, Oxford, 1972)

Here we have a contrast between failure to please the senses and boundless pleasure given to the intellect through scientific study. And Aristotle argues that the intellectual pleasure of studying even inherently unpleasant objects can compensate for their repugnance to the senses.

What is notable in this text is the extent to which the pleasure afforded by nature's products comes from recognition of their *causes*: 'for those who can recognize causes and are by nature philosophers' ($645^{a}10$), and 'at least when we can discern causes' ($^{a}15$). Our marvel at nature's skill depends upon our understanding the ends for which she makes her products, and the ingenuity with which their parts are adapted to those ends. The pleasure comes from grasping the 'final cause', i.e. understanding each part of the creature in the light of its function, which is the study upon which Aristotle is just embarking in these lectures on animal parts ($639^{b}14$–16, cf. $646^{a}8$–$646^{b}27$).

If his analogical argument is to work here, the same must hold for our admiration of the skill with which a representation is crafted. We admire each element in the likeness when we understand *its* final cause, its role in the larger whole to which it belongs. This requires us to see what item in the original it was designed to capture, and thus how it contributes to our detailed understanding of a real living thing. Hence we can learn from the likeness 'what each thing is'. By noting, for example, that *that* is the kidney or the bladder, we can learn what each of those organs is. In this way we can learn about inherently repulsive objects from 'those likenesses of them that have been executed with very great precision',[29] which are the ones that Aristotle says we enjoy viewing. His mention of 'precision' is particularly significant, for it is likenesses fashioned in precise detail that can teach us, often better than any real thing, just how the parts of an animal, or of each of its organs, are structured and interrelated, and thus how they enable the organ or the animal as a whole to function. That, indeed, is the purpose of a laboratory model or diagram such as Aristotle's lecture-room must have contained.[30] And the pleasure taken in studying such likenesses comes from what the *Rhetoric* calls 'learning and wondering', i.e. from gratifying our curiosity and from admiring nature's cunning.

An excellent example occurs in the *History of Animals* (510^{a}30–4), where Aristotle is describing the testicles of viviparous footed animals,

[29] My translation of *toutōn tas eikonas tas malista ēkribōmenas* (*Po.* 48^{b}11). The phrase refers not to *all* likenesses of repulsive objects, but to a subset of them, viz. those that have been executed with very great precision. This nuance is easily missed in translation, and some versions are badly misleading: Janko, 'the most proficient images of things'; Bywater, 'the most realistic representations of them in art'. It is important to ask whether *tas eikonas* at ^{b}15 should be taken to mean 'likenesses' *in general*, as by e.g. Halliwell, Janko, and Nussbaum (*Fragility of Goodness*, 388), or to mean '*these* likenesses', i.e. the likenesses of repulsive objects mentioned at ^{b}11 (as by Hubbard, L. J. Potts (*Aristotle on the Art of Fiction*, Cambridge 1962), and Else). With the latter translation, the visual example at ^{b}17 should be an instance of those horrors, in which case it can hardly be an ordinary human portrait, and the grounds for suspecting *houtos ekeinos* (as usually interpreted) will be strengthened. Else legitimately renders *malista ēkribōmenas* 'when executed in very great detail', but he prefaces this with a gratuitous 'even'. There is no basis for this in the Greek; and the implication that we enjoy the likenesses of horrible objects *in spite of* rather than *because of* their detail is unwarranted. Janko (p. xv) most curiously offers Aristotle a defence against the objection that, on his theory, a sketch of a cow (recognized from its four legs, horns, etc.) 'involves a loss of detail', when detail is precisely what Aristotle himself stresses! On the interpretation proposed here, the detail in the likenesses is just what makes them enjoyable objects of study.

[30] For Aristotle's lecture-room and its equipment, see the entertaining article by H. Jackson, 'Aristotle's Lecture-Room and Lectures', *Journal of Philology*, 35 (1920), 191–200.

and explaining the complex duct-work that links them with the aorta, the kidneys, the bladder, and the penis:

> all this may be studied by the light of the accompanying diagram (*tēs hupographēs tēsde*); wherein the letter *A* marks the starting-point of the ducts that extend from the aorta; the letters *KK* mark the heads of the testicles and the ducts descending to them; the ducts extending from these along the testicles are marked *ΩΩ*; the ducts turning back, in which is the white fluid, are marked *BB*; the penis *Δ*; the bladder *E*; and the testicles *ΨΨ*. (Oxford trans., rev. J. Barnes, *The Complete Works of Aristotle* (Princeton, 1984))

Students at this lecture are indeed 'coming to understand, and inferring what each thing is', for they are learning, by studying 'this diagram here', exactly how the genital apparatus of these animals is structured. To enjoy learning this from the diagram, they must already be able to recognize the testicles as such (and therefore must have seen such organs before). But the diagram enables them also to figure out how they are connected with other organs, how the seminal fluid is stored in them, and how the whole reproductive system works. In this way a visual likeness can enable the student to move beyond the mere ability to recognize certain organs ('those are testicles'), to a detailed understanding of what job they do and how they do it ('so *that* is what those things are!'). This is notably the case when the diagram makes visible an internal or 'deep' structure that escapes superficial observation, and can be discovered only by dissection, which has been mentioned just above (509^b23).

If this is the class-room situation presupposed in our texts, we may understand the neuter demonstratives of the *Rhetoric* passage as identifying items in a diagram or replica with their counterparts in a real animal, perhaps a cadaver on the dissecting table. The words '*this* is *that*' are accompanied by the lecturer's gestures towards an element in the likeness and its counterpart in the real thing. We understand and infer 'what each thing is' when we grasp not only what each item in the figure represents but also what the real thing represented is for. The understanding and inferring are not merely a matter of correctly deducing which real item is represented by the likeness, but also of finding out something about the real item *itself*. 'Learning' from a representation depends crucially upon coming to see what job the represented item does and how it does it. Thus the 'understanding and inferring' that are made possible by the representation of even inherently disgusting objects are connected with an improved understanding of the natural order. Which is precisely the claim we have

seen Aristotle making for epic and dramatic fiction with respect to human life and action.

If this is correct, it points to a suggestive and fruitful analogy in Aristotle's mind between learning from epic or tragedy and learning from the detailed study of nature. In both there is a tension between sensory or emotional revulsion and intellectual fascination; and in both cases the latter compensates abundantly for the former. Especially notable in this connection is the reference at *Poetics* $48^{b}12$ to corpses.[31] These, we remember, are strewn all over the Homeric epics; and in tragedy, though deaths do not usually occur on the stage, they are often reported in gross physical detail. Pain and suffering, more broadly, are endemic in both genres; and in one passage ($52^{b}10$–13) Aristotle treats suffering (*pathos*), exemplified by 'visible deaths, torments, woundings, and other things of the same kind', as a vital ingredient in tragic plot, even though he does not regard *all* such suffering as appropriately 'pitiful' for tragedy ($53^{b}15$–18).

The visual horrors that he is thinking of at *Rhetoric* $1371^{b}4$–9 and *Poetics* $48^{b}10$–12 do not seem especially likely to be the corpses that were occasionally represented in ancient paintings or sculptures.[32] They are much more likely to be cadavers introduced in his own lecture-room, and used for instruction or research. These would very naturally prompt references during a lecture to 'things which in themselves we see with pain', and would provide handy analogues for the painful subject-matter of epic and drama. In viewing both sets of objects, we gain pleasure not from the grisly realities themselves, but from learning, through their representations, about the relevant living species.

Plato, we may recall, had viewed the horrors of drama as pandering to a morbid side of our nature. To illustrate one sort of psychological conflict, he had mentioned a certain Leontius (*Rep.* 439 E–440 A), who gratified a ghoulish urge to peek at the corpses of some executed criminals, ashamed though he was of wanting to feast his eyes on the gruesome sight. The dramatist, in Plato's view of him, caters for just such a prurient impulse.[33]

[31] The implicit relevance of this example to tragedy is rightly observed by Halliwell, *Aristotle's* Poetics, 64 n. 23.

[32] Thus Lucas, p. 72, on $48^{b}12$. 'The lowest animals' would consort somewhat oddly with such corpses (as Lucas seems to realize), whereas they could quite naturally be paired with cadavers.

[33] Leontius' voyeurism is not fully explained. As J. Annas notes (*An Introduction to Plato's* Republic (Oxford, 1981), 129), it may have had a sexual basis, in view of his

Aristotle's remarks about the representation of inherently painful things, such as base animals and cadavers, can be read as a response to this.[34] What we enjoy in poetic fiction is not the horrible thing itself, but coming to understand that horror, learning about its genesis in human motivation and feeling, from the way the author has depicted the doings and sufferings of his characters. That is why Aristotle scornfully dismisses as 'quite outside the sphere of tragedy' (53^b8–10) those who strive for sensational effects by spectacular or lavish staging. The mere relish of atrocity forms no part of the pleasure that is 'proper' to tragedy. If Aristotle lived in our time, he would pass similar judgement upon merchants of pain and cruelty in the film industry. But he would also contend that the fictional exploration of human suffering in film or theatre need no more be morbid than the clinical study of animal pathology need be pathological.

We can now return to the text of *Po.* 48^b17. If it contains the same thought as the parallel passages just discussed, we shall do well, with some critics,[35] to read the demonstratives at 48^b17 as neuter, an easy

penchant for cadaverous youths, evidenced in a fragment from contemporary comedy (cf. J. Adam (ed.), *The* Republic *of Plato*, 2 vols. (Cambridge, 1902; repr. 1969), i. 255, on 439 E). But his story also reminds us of 'mixed pleasures' in the *Philebus* (47 D–50 E), for it exemplifies the pleasure felt in suffering. Although this particular 'mixed pleasure' is explicitly discussed only in connection with comedy (48 A–50 A), Plato mentions it as typical of a wider class of mixed feelings aroused in drama as well as in real life (50 B–D). The indictments of mimetic poetry at *Rep.* 603 B–D and 606 D 1–7 are, I think, broad enough to cover many such paradoxical alloys of pleasure with pain.

[34] These remarks once prompted Dorothy Sayers, 'Aristotle on Detective Fiction', in *Unpopular Opinions* (New York, 1947), 222–36, at pp. 222–3, tongue-in-cheek, to attribute to Aristotle 'a stout appetite for the gruesome . . . The crawling horror of *The Speckled Band* would, we infer, have pleased him no less than *The Corpse in the Car*, *The Corpse in Cold Storage* or *The Body in the Silo*.' Of course we need infer nothing of the sort, any more than we need attribute macabre tastes to a pathologist merely because he is keen on his job.

[35] Nussbaum, *Fragility of Goodness*, 388, has recently adopted this emendation, also citing *Rhet.* 1371^b5ff. But she reminds us, lest the passage should sound 'too flat to support any sophisticated account of tragic pleasure', that 'Aristotle is here speaking very generally of human delight, at all ages, in works of art of many types'. To my ear the words sound by no means 'too flat' to support the required extension to pleasure in learning from poetic representation. Although their intended application is indeed general (and they lend themselves to further 'sophistication'), they were prompted not by 'works of art', but by the specific sort of learning that is achieved with visual aids in a class-room. This would explain the prominence of 'philosophers', downplayed by Lucas (p. 73, on 48^b17), but properly stressed by Halliwell (*Aristotle's* Poetics, 78). The connection with zoological diagrams or replicas and cadavers was seen by Else (*Aristotle's* Poetics*: The Argument*, 128) and by Janko (p. 74, on 48^b10), but neither identifies the specific learning about 'final causes' and organic functioning that can be heard in the text, if *touto ekeino* is read at 48^b17.

emendation.[36] If we accept this change, what Aristotle has in mind is not the identification of the subject of a human likeness ('that is so-and-so'), but the recognition of each element within a complex diagram or replica as representing a corresponding part of a living thing ('that is the kidney'); and the learning through inference of general truths about living things of the relevant type ('what the kidney is', i.e. what it is *for* and how it works). This reading makes the passage prefigure the sort of dispassionate learning of universals from tragedy and epic that we have distilled from later texts.

It also frees Aristotle from a common suspicion of aesthetic naïvety. He says that a representation will not produce pleasure *qua* representation if one happens to have no previous familiarity with the sight ($48^b17–18$).[37] This has suggested to many readers that the pleasure

[36] By reading *touto ekeino* we avoid the switch to masculine demonstratives, which is strange after *ti hekaston* ($48^b16–17$), as Lucas noted ad loc. For *touto ekeino* cf. also *Rhet.* 1410^b18. If we retain *houtos ekeinos*, understanding the subject of the likeness as human, the pronouns cannot refer to an anatomical diagram. If Aristotle (or his listener) wrote *houtos ekeinos*, he may have had in mind the identification of *each figure* within a composite picture containing several human subjects recognizable by members of his audience. (Jackson suggested that two such pictures in Aristotle's lecture-room depicted well-known scenes from Plato's *Protagoras* and *Phaedo*.) Or the portrait might have depicted an individual present at the lecture, who could be indicated as 'that person' (*ekeinos*), such as Coriscus (*De mem.* 450^b31, cf. *De insomn.* 461^b25). But whatever likenesses Aristotle is thinking of, 'understanding' and 'inferring' are harder to interpret if the demonstratives are masculine; and scarcely less so (*pace* Else, *Aristotle's* Poetics: *The Argument*, 132; trans., p. 85 n. 33) whether the likeness is recognized as being one of a familiar species ('that is a squid, an antelope, or whatever') or of a familiar individual ('that is Coriscus'). For either way it remains obscure just *what* is 'understood' or 'inferred', *how* the understanding or inferring is supposed to take place, and *why* no pleasure is produced for a viewer who has not seen the item before. If anatomical learning is not the key to the passage, Aristotle might be thinking of our ability to 'understand and infer', from the representation of an individual, something about the type to which that subject belongs, through the highlighting of significant features of the type that we had not noticed before. That interpretation would be more plausible if we emended *houtos ekeinos* to *toioutos ekeinos*, a fairly small textual change. In that way, as in mine, the text could be seen to prefigure the claim of ch. 9, that poetry aims at 'universals'. But the link with Aristotle's repeated emphasis in the *Poetics* upon causal nexus is far stronger if we read *touto ekeino*, and take the demonstratives as advocated above.

[37] Halliwell (*Aristotle's* Poetics, 79 n. 45) considers that this assertion, together with *Rhet.* 1371^b4ff., refutes Else's belief that Aristotle is thinking of scientific models and diagrams; hence he thinks Else mistaken in seeing any reference to universals in the visual example. But the assertion at $48^b17–18$ is surely puzzling on any view. It seems hardly more plausible to claim for a portrait that it will produce no pleasure *qua* representation for one who has not previously seen its subject than to claim this for a replica or diagram. And Halliwell himself (*Aristotle's* Poetics, 77 n. 42) finds difficulty in applying the visual example to poetry if it contains no implicit reference to universals. It is not, indeed, clear exactly *what* Aristotle is supposing at 48^b17 not to have been

basic to aesthetic response lay, for him, merely in seeing a picture's resemblance to a familiar original. To that view it may, of course, be objected that one may derive greater pleasure, and a more valuable aesthetic experience, from a Vermeer portrait of some wholly unknown person, than from recognizing a snapshot of one's mother-in-law.[38] But on our account of the passage, Aristotle does not mean that the pleasure produced by a likeness derives from seeing its resemblance to a familiar human individual: or that we can judge a portrait aesthetically only in terms of its likeness to someone we already know. For our interest in the likeness is not limited to mere recognition of the *particular* item represented. Rather, our pleasure comes from learning general truths about a certain *sort* of subject from parts or aspects of that subject upon which the likeness has focused our attention. We can gain pleasure from studying the likeness for what it can teach us, in general, about its counterparts in real life.[39] It

'previously seen', since no grammatical object of 'seen' (*proeōrakōs*) is expressed. But could he really have meant, or even believed, that a likeness can give pleasure *qua* representation only if one has previously seen the real *particular* subject represented? An enjoyable picture may have *no* real subject; and even when it has one, why must one have seen that very subject in order for the picture to produce pleasure *qua* representation? That might be so if the pleasure in question depended upon the viewer's ability to compare the likeness with the original; but no such ability is here stressed (as it is at *Phaedo*, 73 C–74 E). It would be slightly more plausible to claim that one must have previously seen an item of the relevant type: to enjoy a picture of a horse *qua* representation, one need not have seen Dobbin, but must at least have seen *a* horse before, to be able to recognize the likeness of one. But even that much might well be disputed, so it will seem advisable to refine the claim still further, by saying, for example, that the picture must portray 'an identifiable (*though not necessarily a real*) figure' (Halliwell, *Aristotle's* Poetics, 73, emphasis added), or by speaking of 'the representation of a *possible* reality which it embodies' (ibid. 74, emphasis added). Yet how exactly, with such refinements, are we to understand *proeōrakōs*? In what sense must we have 'previously seen' a centaur or a cyclops, in order to enjoy a picture of one? By connecting the passage with scientific models and diagrams, and interpreting it as I have proposed, we avoid such problems, but we can still relate it to the doctrine about universals in ch. 9.

[38] Lucas (p. 72, on $48^{b}13$) says that the mere recognition of a resemblance to the subject 'has no relevance to the aesthetic enjoyment of a picture'. Cf. R. G. Collingwood, *The Principles of Art* (Oxford, 1938), 44: 'The sitters [for portraits by Raphael, Titian, *et al.*] are dead and gone, and we cannot check the likeness for ourselves. If, therefore, the only kind of merit a portrait could have were its likeness to the sitter, we could not possibly distinguish, except where the sitter is still alive and unchanged, between a good portrait and a bad.' Collingwood goes on to recall a wealthy art-collector who refrained from buying portraits on the ground that there was no way of telling a good portrait from a bad when once the sitter was dead. 'He was', Collingwood adds, 'a very good stockbroker.' See also n. 28 above.

[39] A parallel point about the learning of 'universals' could be derived from Aristotle's first explanation for poetry at the start of ch. 4 ($48^{b}5$–8), i.e. the distinctive human tendency to represent. When he says that the earliest lessons are learnt through *mimēsis*

thus has the kind of instructive realism that is to be found in epic or drama. For much in these, as in other modes of fiction, strikes us as true to our own prior experience of human behaviour; and we learn from them with enjoyment because they recover for us what was implicit in that experience and enable us to view it with a deepened understanding. If some such perspective upon fiction is implicit in Aristotle's visual example at $48^{b}15$–19, then the insights of ch. 9 regarding its generalizing aim are already anticipated in ch. 4.

Several important aspects of Aristotle's literary theory have been passed over in this paper. Almost nothing has been said of the emotional impact of fiction, or its contribution to the development of moral sensibility. The whole problem of *katharsis*, which no overall interpretation of the *Poetics* can ignore, has been left aside. There is no space even to raise the key questions here. But perhaps we can learn something from the texts discussed above, without becoming entangled in more controversial issues. We have found in those texts a significant analogy between learning from tragedy or epic and the study of organic nature. In the light of that analogy, 'poetry' should be seen not, with Plato, as the arch-enemy of philosophy but rather as its ally. Tragedy and epic can illuminate human life and nature. The understanding to be gained from fiction in general is a rich source of intellectual pleasure, enough to give the Platonist a run for his money, even if it paid no emotional or moral dividends at all.

Aristotle's approach to poetry, in the aspect we have considered, may be broadly dubbed 'intellectualist'. By way of conclusion, and for the contrast it affords with that approach, it may be worth recalling a memorable protest once voiced by Wordsworth against the intellectual study of nature:

> Sweet is the lore that nature brings;
> Our meddling intellect
> Mis-shapes the beauteous forms of things:—
> We murder to dissect.

($48^{b}7$–8), he may be thinking (possibly *inter alia*: cf. Halliwell, *Aristotle's* Poetics, 70 with n. 34) of children learning to draw. At *Pol.* $1338^{b}1$ he says that this should be taught, not for its commercial utility, 'but perhaps rather because it makes them observers of bodily beauty'. Similarly, at $1338^{a}18$–19 drawing is said to make them better judges of the products of craftsmen. We may remain totally blind to certain visual properties of an object, despite seeing countless instances of it, until we try to draw it. And by drawing a particular, we may learn something about the class to which it belongs.

Aristotle did not, of course, share Wordsworth's romantic vision of 'nature's lore'. To his eye, our admiration of the 'beauteous forms' of things required the most intense scrutiny of their minute structure. This applied no less to the artefacts called epic and tragedy than to living things. By taking them apart, our intellects need not 'mis-shape their beauteous forms'. The 'anatomy' of criticism is not murder. On the contrary, works of fiction will come fully to life, will do their job for us, only if we will study them patiently, analyse their detail, ponder the role of each element in the complex whole. It is in that way that a literary work can achieve its full impact, produce its 'proper pleasure'.

In that direction we may still seek a sane rationale for literary criticism. Along the Aristotelian trail we have followed, the paths of the philosopher, the scientist, the fiction-writer, and the critic will all ultimately converge in the human quest for self-understanding. And it may well be in some such way that the 'old quarrel between philosophy and poet-craft' of which Plato once spoke should be finally laid to rest.

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ARISTOTLE'S *POETICS* IN AVICENNA'S COMMENTARY

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PRESENT-DAY Western scholarship on Aristotle's *Poetics* does not usually concern itself with medieval Arabic commentaries on that work. Although knowledge of this text was transmitted to Europe through Arabic translations and commentaries, later European scholars not only gained access to the Greek originals, thus making translations from Arabic redundant in part, but, also, under the influence of Aquinas, medieval European thinkers later came to reject the influence of Averroism and of the Arabic philosophical tradition.[1] Further, post-medieval developments in philosophy led European scholars of Greek philosophy and culture to produce a different tradition—so much so that Arabic writings on Aristotle can now seem foreign.[2]

However, the medieval Arabic understanding of Aristotle's *Poetics* can still be of interest. For example, Arabic commentators had

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[1] See Leon Gauthier, *Ibn Rochd* (Averroes) (Paris, 1948). Throughout the following paper I have referred to the philosopher in question as Ibn Sina (rather than as Avicenna) because that was his name in the Arabic literature. However, I have not assumed any knowledge of Arabic among readers and have used or referred to European-language translations of the Arabic texts wherever possible.

[2] But not always so foreign: see H. Davidson, *Proofs for Eternity, Creation and the Existence of God in Medieval Islamic and Jewish Philosophy* (New York, 1987), where the author shows that a number of arguments first put forward by Al-Farabi (Alpharabi), Ibn Sina, and Ibn Rushd (Averroes) were not only reproduced by medieval Christian philosophers, and so influenced the scholastics, but also found their way into the arguments put forward by Leibniz and Spinoza.

to take account of cultural differences between their world and that of the Greeks, and so were sensitive to problems of the cultural context of works. Similarly, the philosophical tradition that emerged in Arabic thought under the influence of Aristotle was one which stressed the role and power of logic in justifying claims to validity in knowledge, morality, and poetics. This tradition had to define itself against established religious philosophy: the latter took methods developed in the exegesis and interpretation of the Quran, applied them to the study of Arabic language and grammar, and consequently found a close interrelation between semantic and syntactical issues. Grammatical structure was construed as constitutive of meaning, and validity was understood as a matter of linguistic structures. By contrast with this grammatic approach, and together with the self-consciousness about cultural background referred to above, the stress on logic in explaining validity gives to the Arabic reception of the *Poetics* a distinctiveness in theme and issues which we might do well to consider, for it fits our present concerns.

One issue that arises here is as follows. Medieval Arabic theories of poetics are thought to distinguish the logical validity of poetic syllogisms from the moral or other validity of their content.[3] This distinction obscures issues about the value of poems, it is argued, because it fails to explain the connection between the different sorts of validity at play in our aesthetic activity. In this paper I shall examine Ibn Sina's (Avicenna: AD 980–1037) handling of the issue to show that the logical or formal validity of poetic syllogisms is such as makes unnecessary any attempt to seek some moral approbation or other validity for the content of poetry.[4]

[3] Such a claim is made by O. Hardison in 'The Place of Averroes' Commentary on the *Poetics* in the History of Medieval Criticism', in J. L. Lievsay (ed.), *Medieval and Renaissance Studies*, 4 (1970), 57–81. It seems to me that his claims about Averroes' theory are taken to apply also to Ibn Sina.

[4] The proposals I make are put forward tentatively, to show that Ibn Sina's writings may be construed as answering questions on the issue of logical and moral validity. It may need to be argued that his work contains such a theory; but this is not the occasion for arguing the case by exegesis. Instead, in what follows I shall use premisses which are not alien to Ibn Sina's theory but shall not seek to justify my construal of those premisses.

1. Poetic syllogisms and pleasure

Ibn Sina wants to justify the validity of literary and poetic discourse by arguing that it involves a procedure which is comparable to objective demonstrative syllogisms. In literary and poetic discourse, figurative devices generate meaning through a process of rational comparison of constitutive elements that is similar to the process of arriving at the conclusions of a valid demonstrative syllogism from its premisses. In effect, the aesthetic use of language depends on a poetic syllogism that is similar to, say, demonstrative syllogisms; and so, to justify the validity of literary meanings, we may explain a poetic syllogism by examining the validity of demonstrative syllogisms, for the structure and nature of the latter will tell us what we must look for in order to explain and justify the former.[5]

[5] This construal of the issue seems already to beg an important question. Ibn Sina does not explicitly argue that poetic devices are poetic syllogisms, though he proposes a general relation of universal characteristics of language to the rules of logic. Although poetic devices are among the universal characteristics which are related to logic, it may seem that in now attending to poetic syllogisms we are merely assuming that by dealing with the latter we shall have said all that needs to be said concerning linguistic poetic devices. In order to be useful to Ibn Sina's conception of poetics and poetic forms, it must be shown that the poetic syllogistic can sustain the characteristics yielded by poetic forms. By clarifying how the poetic syllogistic sustains poetic devices we can show how poetic devices, having a particular linguistic character, are capable of being logically valid, by arguing, among other things, that syllogisms generally have a certain character, and must satisfy given requirements—the proof-procedures cannot be infinite, for example, and the procedures must be complete in a sense to be explained; that poetic syllogisms have this character; and that the cumulative and poetic senses generated by poetic devices can satisfy this requirement of poetic syllogisms.

Although Ibn Sina does not explicity make this argument, there are at least two reasons for construing the case as I have done. First, if we can defend the validity of a poetic syllogism, then, as I have suggested above, that will justify us in supposing that the general validity of poetic devices has been justified by showing their possibility in logic. There may be other features of poetic devices that also need explanation, and these may be gained by reference to the role of the imagination in constructing poetic utterances—and these features may be examined at will once their logical validity is established. Second, to make this argument for validity I rely on issues raised in *Remarks and Admonitions*, where Ibn Sina proposes that we understand poetic syllogisms in a particular way as outlined in the text of this paper and in n. 13 below. Now, *Remarks and Admonitions* is a text that uses the 'indicative' method, in which Ibn Sina provides questions and answers to issues but does not argue systematically for them because he expects the reader to engage with the text and arrive at the conclusions in the right way by themselves. (Cf. Dimitri Gutas, *Avicenna and the Aristotelian Tradition: Introduction to Reading Avicenna's Philosophical Works*, iv. *Islamic Philosophy and Theology: Texts and Studies*, ed. Hans Daiber (Leiden, 1988) 140–1.) As the text intentional includes lacunae, the reader must produce arguments, for which he may rely on premisses and conclusions

Ibn Sina exhibits the nature of syllogisms in diverse texts. It is outside the scope of this paper to consider all the details of his arguments and explication, and it is more sensible to examine such details of the nature of demonstrative and poetic syllogism as will both ground the theory and show where it needs development. Ibn Sina initially identifies the syllogism as 'a discourse composed of statements. If the propositions which the syllogism involves are admitted, this by itself necessarily leads to another statement.'[6] But then he clarifies his interest in the *relation* between propositions by saying that 'it is not a condition of [this kind of proof] to have admitted propositions in order that it be a syllogism. Rather, its condition is such that, if its propositions are admitted, then another statement necessarily follows them. This is the condition for its being a syllogism.'[7] The necessity with which one statement follows from another, of course, parallels Aristotle's definition of syllogisms as a 'discourse in which, certain things being posited, something other than what is posited follows of necessity from their being so'.[8] Consonantly, Ibn Sina's comparison of figurative language with logical necessity stresses the rational and meaning-dependent nature of conviction in both cases.[9] The deployment of poetic syllogisms makes poetic works meaningful and successful. These poetic syllogisms are 'composed of imagined propositions, inasmuch as their imagined aspect is considered, be they true or false. In short, they are composed of premisses [having] a certain disposition and composition, which the soul receives by virtue of their resemblance or [their] truth.'[10] Although both kinds of syllogism instantiate a similar

drawn from other parts of Ibn Sina's works. And in providing this account of the poetic syllogism and its foundation of poetic devices, then, I am producing an argument that relies on other parts of Ibn Sina's works and yields the conclusions he favours. In doing so I am following the practice he expects and, without using premisses alien to Ibn Sina, I am seeking to defend his conclusions.

[6] *Remarks and Admonitions: Logic*, sometimes translated as *Pointers and Reminders* (see Gutas, *Avicenna and the Aristotelian Tradition*, iv. 54–6, 140–1). In this paper I have used *Ibn Sina, Remarks and Admonitions, Part One: Logic*, translated from the original Arabic with an Introduction and Notes by Shams Constantine Inati (Medieval Sources in Translation, 28; Toronto, 1984). The text is usually abbreviated below as *Remarks and Admonitions: Logic*. The quotation which this footnote refers to is from p. 130 of this translation and edition.

[7] Ibid. 131.

[8] Arist. *Pr. An.* 1, 24^b16. I have used an unpublished translation by Prof. Robert Price.

[9] Quoted in Georg Schoeler, 'Der poetische Syllogismus: Ein Beitrag zum Verständnis der "logischen" Poetik der Araber', *Zeitschrift der Deutschen Morgenländischen Gesellschaft*, 135 (1983), 43–92, at pp. 46–7.

[10] *Remarks and Admonitions: Logic*, 148.

'comparison between premisses', the poetic case uses 'premisses inspired by emotion'. And this reference to the emotions is extended by saying that we give compliance or imaginative assent to a poetic syllogism due to the pleasure and wonder which we feel in response to understanding and thereby appreciating the harmony of its elements. Our concern is with the meanings given to poetic premisses when their synthesis, structured by poetic forms, gives rise to pleasure and wonder in a process which is comparable to the conviction we gain in understanding and accepting the demonstrative syllogism.

When Ibn Sina explains aesthetic validity by reference to the poetic syllogism, he has this to say of the logical form. The poetic syllogism,

> although it does not make any assertions which claim truth, instead seeks to evoke a representation, [and] seems nevertheless to make an assertion claiming truth. So far as it is poetry, it is not said to be false, when the premisses are used as if they were accepted [*musallama*]. For example, when one says 'N.N. is a moon' because he is fair of face, then one concludes as follows: N.N. is fair of face. Everyone who is fair of face is a moon. Therefore N.N. is a moon. There also applies to this assertion [*tasdiq*] that if one accepts what is in it, then an assertion follows from it. But the poet does not at all want this conclusion to be believed, even if he *seems* to, so far as he is a poet; rather, his aim is to suggest through his conclusion that the soul [of the audience] finds the object of praise to be fair. Likewise, when [the poet] states: 'A rose in the anus of a mule, in the middle of which dung is visible' it is as if he has said: everything which is in this way the dung of a mule (i.e. red outside, yellow inside) is filthy and dirty. Even though it is a syllogism—i.e. one accepts the premisses and proves from that the conclusion—the poet in no way intends to state that his opinion [statement] is correct, rather he wants the soul to feel disgust for that which the statement is about.[11]

This description of the poetic syllogism does not coincide in every respect with what he says of it elsewhere. Nor does it agree wholly with the conclusions Ibn Sina relies on in his first chapter of the *Commentary on the* Poetics *of Aristotle*. We cannot expect to resolve all such differences, and in any case the central claims are similar in all the texts. As the most useful explanation is given in the longer passage just cited, it is as well to use that one. Ibn Sina is claiming that whether their structure is explicitly expressed or merely implicit, poetic and literary utterances have a logical form which follows the pattern of demonstrative reasoning. Any combination of terms in a poetic

[11] Ibn Sina, *Kitab al-Qiyas*, ed. S. Zayed (Cairo, 1964), 57. This passage is quoted in Schoeler, 'Der poetische Syllogismus', 45 n. 7.

utterance, if it is meaningful, can be analysed and its logical structure displayed. Indeed, it is only because it has this logical structure, among other features, that the poetic utterance is meaningful.[12] Ibn Sina's example of an explicit syllogism is 'N.N. is a moon'; the structure of this metaphor is easily proposed: it is a conclusion. The minor premiss, that 'N.N. is fair of face', and the major premiss that 'Everyone fair of face is a moon', lead to the conclusion that 'N.N. is a moon'. Other metaphors and literary devices will have a similar structure, being capable of analysis into parallel premisses. Some may be more complicated, and figurative language generally may involve other kinds of poetic forms in addition; while other uses of language may contain more than one poetic syllogism.[13]

[12] In the passage cited Ibn Sina seems content to display examples of logical structure in the 'Barbara' mood. It is possible also to use a Celarent mood, and in his *Commentary on the* Poetics *of Aristotle* he uses both as the fundamental mechanisms to identify five poetic forms that structure poetic meanings. However, this talk of Barbara and Celarent moods should not disguise the distinctive character of poetic syllogisms.

[13] But the ordinary syllogisms in their Barbara and Celarent moods remain important. In any case, the major premiss appears to have the form of a statement of identity, though in fact it only affirms a similarity (See Schoeler, 'Der poetische Syllogismus'.) Clearly everyone who is fair of face is *not* a moon, even if it is possible, in a given cultural context, to see a resemblance. One problem with this description is that as the comparison contained in the metaphor—the conclusion—is not strikingly different from the similarity proposed in the major premiss, we do not seem to have advanced very far in understanding and justifying the use of metaphors by analysing them to display their logical structure. It seems that both the premisses and the conclusion are infected by the same lacunae. The suggestion was that 'N.N. is a moon' should be understood as affirming a similarity where such an affirmation could be analysed into the logical structure of the poetic syllogism. That is, 'N.N. is a moon' or 'the horses of youth' seem at first to be incomprehensible. They proclaim a resemblance as if it were an identity, and we do not know how to interpret them meaningfully. To solve this difficulty, Ibn Sina proposes that we consider that such metaphors are meaningful as the conclusions of poetic syllogisms, and suggests that therefore we seek to understand them by analysing them into the premisses from which, as syllogistic conclusions, they were constructed. This will show us something of their meanings and why they are valid. But when we carry out this analysis, it turns out that the premisses themselves contain the kind of comparison they were supposed to resolve. The major premiss of 'N.N. is a moon' makes a comparison which is not true and yet seems to assert an identity when, at best, it only asserts or affirms a similarity. In other words, the poetic syllogism contains a premiss which latter also stands in need of analysis into logical structure to explain its affirmation of a similarity. As the premiss itself stands in need of explanation, and as Ibn Sina has proposed that such explanation is provided by treating these statements as syllogistic conclusions, it seems that we must analyse the premiss into a subset of further premisses—and this process may occur without end so long as the premisses only affirm similarities. However, in *Remarks and Admonitions: Logic*, Ibn Sina makes clear that our assent to poetic premisses is qualitatively distinct from our dealing with syllogistic conclusions (pp. 127, 148). In part their difference is made clear by the distinctive logical role each plays; but also the suggestion is that our

To develop this account further, Ibn Sina writes that we not only conceive of and assent to propositions,[14] but we also accept the conclusions of proofs using the propositions as premisses.[15] Cognitive conviction turns on, first, grasping meanings and so identifying the terms in the premiss of an argument; second, knowing that their use in premisses is appropriate to the object, so that, third, given the validity of the proof, fourth, the assertion they go to form is true. Similarly, where metaphorical or figurative language leads us to perceive resemblances and identities of meanings, the syllogistic form is at work. We understand the meaning of 'the evening of life' because we can grasp the juxtaposition of the span of day with the span of life. But, in the aesthetic use of language, we understand meanings in order to generate assent through experiences of pleasure rather than by regarding the truth or falsity of the relations apparently asserted in the terms of the poetic syllogism. Thus, our metaphor works becuse of its syllogistic structure, yet not because life really is identical with a day but because the associations suggested by the comparison evoke a particular response in us.

This brief review of the comparison between poetic and demonstrative or cognitive syllogisms needs to be deepened by explaining their necessity and validity. Logical necessity is defined by saying that conclusions must follow if the premisses are accepted and are related by semantical and syntactical relations to the conclusion. '[I]f its propositions [premisses] are admitted, then another statement necessarily follows from them.'[16] The logical necessity operating here

assent to premisses is based on a feeling of 'rightness', or 'aptness', that gives rise to wonder when we assent to the premiss. This assent to the premiss is also reason for supposing that the process of analysis need not proceed indefinitely.

[14] Cf. e.g. *Remarks and Admonitions: Logic*, 118–28.

[15] Ibid. 148. In addition to the syllogism, Ibn Sina also discusses two other kinds of proof—induction and analogy—but both of these are dependent on syllogisms, and the latter are 'the underpinning' of all kinds of proof. Cf. *Remarks and Admonitions: Logic*, 130ff.

[16] Ibid. 131. Demonstrative syllogisms are distinguished not by the set of relations they require between premisses but by their premisses. All premisses are such that if certain things are posited or accepted for various reasons, then something other than what is posited, which bears certain syntactical and semantical relations to what is posited or accepted, must follow. The *relation between premisses* is what a syllogistic determines, and that remains constant whether we are concerned with rhetoric, poetics, or demonstration. However, the basis for accepting or positing premisses will differ, depending on whether we are dealing with poetic premisses, rhetorical ones, or ones in demonstrations. These differences in premisses go to distinguish one kind of syllogism from another.

was taken by Aristotle to be primitive and obvious, and so to need no explanation or defence beyond exhibiting its exercise in particular cases. The thought behind this manœuvre, roughly speaking, is this: We ask for explanations in order to clarify meanings. For example, we may clarify 'Zayd is mortal' by explaining that it is the conclusion of two premisses, that 'Zayd is a man' and 'All men are mortal'. But these premisses may be thought to stand in need of further clarification to show what it is for a statement to serve as the premiss of a syllogism or to explain what it means to say that 'Zayd is a man'. The latter may be explained by defining 'man' by reference to terms that are better known, or more easily understood, or more precise. But when we define 'man' as 'a featherless biped', of course it seems possible to ask for the definition to be explained further. So, a 'biped' may be explained in terms of 'any animate creature that usually walks on two legs', and so on. Aristotle maintains that such clarification cannot proceed infinitely. At some point our explanations must come to a stop, usually in the basic categories and terms which we must accept if we are even to ask for clarification. As Ibn Sina argues, 'if every conception requires a prior conception, then such a state of affairs would lead either to regression or circularity'.[17] These basic terms and concepts cannot be explained further because all explanation and thought proceeds by accepting their validity. We might label them as first principles: they must be known directly, without being explained in terms of some more basic definitions, for if they could be so defined, they would not be first principles.

The first principles, for Aristotle, included both the concepts which make up the categories and the logical rules which structure all thought.[18] Ibn Sina identifies the basic concepts in the following way: 'The ideas of "the existent", "the thing", and "the necessary" are impressed in the soul in a primary way, this impression not requiring better-known things to bring it about.' Similarly, 'in the category of

[17] *Metaphysics of al-Shifa*, 1. 5, p. 30, quoted by Michael M. Marmura, 'Avicenna on Primary Concepts in the *Metaphysics* of his *al-Shifa'*, in Roger M. Savory and Dionisius A. Agius (eds.), *Logos Islamikos: Studia Islamica in honorem Georgii Michales Wickens* (Papers in Medieval Studies, 6; Toronto, 1984), 219–39, at p. 223.

[18] In the *Metaphysics* Aristotle evokes the need to avoid *apaideusia*—and its resulting isolation from the rational community—by accepting the law of non-contradiction if there is to be meaningful discourse between rational and cognizant beings. An account of the issues involving philosophical logic in Aristotle's *Prior* and *Posterior Analytics* is provided by Jonathan Lear in *Aristotle and Logical Theory* (Cambridge, 1984). I am indebted to this book for clarifying the role of a number of arguments which Ibn Sina, in following Aristotle, also adopts.

judgement[s] . . . there are primary principles, in themselves found to be true, causing [in turn] assent to the truth of other [propositions]. If these primary propositions do not come to mind or if the expression designating them is not understood, then it would be impossible to know whatever is known through them.' Among judgements, these 'primary intelligibles' include obvious and primitive logical truths.[19] The suggestion is that these logical truths, being the basis for all other explanations and reasoning, cannot be proved by any further set of propositions, but must be known directly, for themselves, and so must be obvious and primitive. On the basis of these logical truths, demonstrative syllogisms, relying on the use of primary concepts and definitions to grasp objects and to assert relations in premisses, are the most certain, while the other kinds of syllogism are varying degrees away from demonstration in certainty.[20]

However, a defence by reference to primitiveness and obviousness, even if it works for demonstration, need not work for poetic syllogisms because the latter are based only on a similarity with the former. What is obvious in the case of logical necessity may need to be explained and justified when used in poetic syllogisms. Of course, conversely, a defence of the former may give us clues concerning how to defend the latter.[21] Ibn Sina defends the primitive and obvious nature of logical validity by displaying the syllogistic forms in examples, where their mechanism is clear, and then arguing that the exhibited forms are adequate for formalizing *all* deductive arguments, whether formal or informal. Given their primitive and obvious character, this is the only way to proceed, for we cannot expect to explain them by 'impart[ing] knowledge not [already] present in the natural intelligence, but [can] merely draw attention to the comprehension of what [any] speaker intends and upholds'.[22] Further, he maintains that of the syllogistic forms, 'the first division, called "the first figure", had been found perfect with much goodness—inasmuch as its syllogistic character, i.e. the necessity of yielding to a conclusion, is evident in itself and not in need of a proof'. Naturally, 'the converse of this division has been found remote from our nature'.[23] Because this first figure is basic, we

[19] Marmura, 'Avicenna on Primary Concepts', 219.

[20] *Remarks and Admonitions: Logic*, 148–50.

[21] Ibid. Ibn Sina's association and explanation of the different kinds of syllogism suggest that possibility.

[22] Marmura, 'Avicenna on Primary Concepts', 222.

[23] *Remarks and Admonitions: Logic*, 134.

cannot expect to prove it: it consists of four perfect and self-evident syllogistic conclusions.[24] (1) All As are Cs;[25] (2) No A are C;[26] (3) Some A are C;[27] (4) Some C are not A.[28] Next, we may propose that all non-formal and imperfect deductions, including the second and third figures Ibn Sina goes on to set out—therefore, *any* deduction—can be converted into perfect and obvious deductions in one or more of these four syllogistic forms. For example, the moods of the second figure are explained by comparison with the first figure. Thus, the 'first mood of the second figure is something like the phrase "Every B is a C, nothing of A is B, therefore nothing of C is A"'. To prove the validity of this argument, Ibn Sina converts it into a mood of the first figure. Accordingly, 'we convert the major, making it "nothing of B is A", and then add to it the minor premiss, thus forming the second mood of the first figure'.[29] The procedure Ibn Sina follows in these passages, then, shows that the variety of formal arguments we use involve at their basis, as the test of their coherence and validity, the syllogistic forms of the first figure and its four moods. Similarly, non-formal deductions, of the kind present in our ordinary reasoning, bear a logical structure that may not be obvious, but if they are to count as reasoning their procedures must be capable of being formalized, and so ultimately must rest on the obvious and primitive first figure. Moreover, if all non-formal and imperfect deductions depend on the perfect and self-evident figure, then we can gain any conclusion only by using premisses which link terms in the conclusion through a middle term in at least one of the four forms. That is, at least one of the four forms will apply in *all* deductions, and will validate the deduction in which it occurs. So, to prove the validity of any non-formal deduction, it is necessary only to clarify which of the four syllogistic conclusions or forms of the first figure lie at its basis, for its four syllogistic forms are obviously valid and are primitive. To justify the non-formal syllogism, we need only to convert it or express it so that we exhibit the presence of the formal and obvious syllogistic at its basis. Consequently, the four syllogistic forms provide a complete and consistent set of rules for *any* deduction and so serve as criteria for validity.

[24] *Remarks and Admonitions: Logic*, 135–7.
[25] This is the Barbara mood: all A are B; all B are C; therefore all A are C.
[26] This is the Celarent mood: All A are B, no B is C; therefore no A are C.
[27] This is the Darii mood: some A are B, all B are C, therefore some A are C.
[28] This is the Ferio mood: some A are B, no B are C, therefore some A are not C.
[29] *Remarks and Admonitions: Logic*, 139.

This claim Ibn Sina explicates in his writings on Logic,[30] and we may hold that his examination of poetic or figurative language and devices is intended to argue analogously to conclusions about *their* nature, formation, and validity. For Ibn Sina, 'the elements which make an utterance imaginative' and therefore poetic include sound and sense, and involve a relation between parts that 'is either proportional or contrastive, and both proportion and contrast are either complete or incomplete. All this is either according to wording or meaning.' Further, all these constructions are constituted by using the five poetic forms identified by Ibn Sina.[31] And we may suggest that the poetic forms are comparable to syllogistic forms in that a figurative meaning is like a conclusion gained by comparing elements in a syllogism. Although in the figurative device we gain a conclusion by comparing meaningful elements to gain a pleasurable harmony, nevertheless, poetic forms must be similar to demonstration in some significant way if we are to claim that they are valid as syllogisms. Given the examples of imperfect and non-formal deductions, we may expect that such similarity will consist in being reducible to the first figure and further in depending on premisses which are accepted in ways parallel to demonstration, dialectic, or rhetoric. That is, Ibn Sina's discussion of poetic forms is not just a summary listing of figures of speech and thought, but serves the more serious aim of defending the necessity of poetic syllogisms by showing that the variety of poetic devices we use ultimately depend for their success on using something like the four perfect, obvious, and primitive syllogistic forms. Similarly, examples of informal reasoning could be shown to depend on obvious syllogistic forms. Thus, in keeping with this analogy, Ibn Sina defends his claims for poetic syllogisms by saying that the only way to gain imaginative poetic meanings is by using terms in a synthesis that follows one of the five poetic or figurative forms which he has displayed. Such a procedure obviously has parallels with the exhibition of the valid forms of demonstrative

[30] See *Remarks and Admonitions: Logic*, e.g. the Seventh Method (pp. 130–43), where Ibn Sina argues that the first figure is central to the validation of proofs, for a succinct statement of a number of these arguments. Other of Ibn Sina's logical works bear out these claims. For example *Burhan* and the passages from *al-Shifa* contained in the *Propositional Logic of Avicenna*, trans. Nabil Shehaby (Dordrecht, 1973). For other approaches to these issues see Lear, *Aristotle and Logical Theory*; W. Heinrichs, *Arabische Dichtung und griechische Poetik* (Beirut, 1969); and Schoeler, 'Der poetische Syllogismus'.

[31] Ibn Sina, *Avicenna's Commentary on the* Poetics *of Aristotle: A Critical Study with an Annotated Translation of the Text*, by Ismail M. Dahiyat (Leiden, 1974), 64–6.

syllogisms. In both we try to show that the basic syllogistic is inescapable.

Ibn Sina says that the five forms of poetic construction or syllogism generate new and figurative meanings through contrast and proportion. One form of construction according to contrast, for example, involved words that do not

> merely differ from one another in terms of sound but also in terms of meaning, i.e. the meaning that it commonly has. The form of this type exists in two or more words of which one means something and the other means its opposite, what is supposed to be its opposite or contrary, or what is proportional to, related to, and connected with its opposite, e.g. *sawad* (blackness) which also means 'arable land', *bayad* (whiteness and wasteland), *rahmah* (mercy), *jahannam* (hell), and all such words.[32]

Ibn Sina's claim is that all figurative language shares in the structure and contruction set out under the rubric of meanings gained by poetic forms. This structure may not always be obvious any more than the syllogistic forms are obviously present in informal deductions, and so may need to be made clear; but they can be supposed present. Further, as the logical necessity of a syllogistic conclusion is justified by displaying the obviously valid forms at its basis, we justify the necessity of poetic conclusions by exhibiting the presence of poetic syllogistic forms.

It may seem that beyond the task of showing the presence of these poetic forms and their parallels with the demonstrative syllogism, we shall also need to propose how their deployment shares in the obvious and evident forms of the first figure. Ultimately, it can be argued, whatever other parallels we may find between the five forms of the poetic syllogistic and the demonstrative syllogistic, only when we show that the poetic forms are based upon the obvious and primitive syllogistic forms do we also justify their validity. However, this claim misconstrues the role of the poetic syllogistic and its relation to demonstration. Ibn Sina distinguishes between different kinds of syllogism by pointing to the variety of premisses, with their distinctive logical and epistemological statuses, that are brought within the same logical structure of syllogistic proof. Demonstrative proofs have premisses that must be accepted; dialectical syllogisms are composed of widely known propositions; rhetorical syllogisms of presumed propositions; and so on.[33] But such differences in premisses fail to

[32] *Commentary on the* Poetics *of Aristotle*, 64–6.
[33] *Remarks and Admonitions: Logic*, 134, 148.

make them any less syllogisms, for they all share in the same procedure of proof identified in the three different syllogistic figures, all of which, ultimately, if valid, must be reducible to the first figure. To be valid as a syllogistic, then, the poetic forms must parallel the rules and proof-procedures that make a syllogism a syllogism. But having this formal structure of proof does not make a poetic syllogism into a demonstrative one, and we do not need a further argument, beyond pointing out that the poetic syllogistic can satisfy the requirements of the syllogistic proof-procedure, to show that the poetic syllogistic is a syllogistic. All kinds of syllogisms—including the dialectical, the rhetorical, and the poetic—fail to be demonstrative for reasons of their premisses, but they are all syllogisms because they share in the obvious and primitive syllogistic in some way. To show how poetic syllogisms can possess validity, we do not need to argue that they are demonstrative in some measure but must see whether and how poetic forms satisfy the requirements of the syllogistic proof-procedures and thereby parallel the first-figure syllogistic. And to show this parallel, we may consider how poetic forms are able to cope with objections which threaten the use and validity of syllogisms generally.

First, we may question the claim that the success of any poetic utterance depends on those five basic ways of constructing poetic meanings (the poetic syllogism), by rejecting the assumption that every poetic meaning can be expressed in those five forms: that is, by raising the issue of the *completeness* of the poetic syllogism. The issue may be explained by reference to a similar problem that occurs elsewhere. In the case of logical necessity, the completeness of a proof-procedure is assessed by seeing how completely it can grasp and exhibit all the logical consequences of a set of premisses. If the use of the four syllogistic forms yields a procedure for proof, allowing us to move legitimately from a set of premisses through inferences to a conclusion, then that proof-procedure would be thought reliable if it accounted for *all* the possibilities contained in the premisses and showed that the conclusion arose from those premisses. For this, the proof-procedure must be finite, and must be capable of incorporating all the logically possible variables resulting from the premisses. But if the *proof-procedure*, first, were itself infinite or, second, inadequate to all the possibilities contained in the premisses, then the procedure would be impossible to complete or its completion would be inadequate to the premisses. To take the second possibility—of the

procedure being inadequate to the premisses—a procedure that could not account for all the possibilities in a set of premisses would be unreliable just because we could never use it with the certainty that we had completely grasped all the implications of the premisses. Some implications, which intuitively we might have expected to follow from the premisses, would not be incorporated in the proof-procedure, and if we were to accept the implications it would have to be because we did not rely on the procedure. This sort of inadequacy will be considered again below, and we need not consider it further here. The first possibility raises other issues: conclusions resulting from the use of a procedure which was infinitely long could always be doubted because it could never be known that any part of the procedure was being followed correctly. This is because the procedure itself could not be completed, and its full details would remain unknown; so any use of it would be based on faith that the as yet untested parts of the procedure did not contain any contradictions or that it did not thwart itself. If it is infinite, it is incomplete, and so ultimately cannot be known to be valid. Therefore, any proofs based on that procedure would also remain questionable and unreliable.

Aristotle dealt with the threat to the completeness of his proof-procedure by first displaying the four syllogistic forms and then arguing that every deduction must link its terms in one of these ways.[34] We saw that Ibn Sina makes a similar claim for the first figure, but further, to defend this claim, we can develop two arguments.[35] First, we can consider a complex set of premisses. Its complexity raises the possibility that we cannot grasp all the logical consequences of all the possible premisses and so our procedure may prove inadequate to understanding or ordering any argument based on those premisses. Second, there may be an infinite number of such premisses, so that our proof using the suggested procedure may never come to an end. In either case, because we have no guarantee that the procedure can cope with all the possibilities contained in the premisses, we cannot be certain about any conclusions we arrive at using that proof-procedure.

Against these possibilities, for Ibn Sina we can propose that a deduction with a large number of premisses can be converted into a series of inferences having only two steps in one of the syllogistic forms. Further, as this leaves open the possibility that there may be no

[34] Arist. *Pr. An.*; and Lear, *Aristotle and Logical Theory*.

[35] These arguments have their counterparts in Aristotle's work. Cf. Lear, *Aristotle and Logical Theory*.

end to the number of inferences in this 'two-step' series, Ibn Sina argues that the process of two-step inferences ends when all the premisses of a syllogism are shown to be principles or axioms which we cannot be required or expected to prove—that the proofs must have an end when we reach those axioms and principles, and so cannot be infinitely long. This argument is expressed in the claims that, first, the premisses of a two-step inference cannot both involve only particulars, second, that it is possible to demonstrate that the universal premisses are ultimately necessary ones, and third, that the minor premiss must ultimately rest on or be an axiom.[36] Thus, the basis of a proof in axioms or principles, the ability to dissolve a set of complex premisses into a set made up of a series of simple premisses, and the use of syllogistic forms, are together taken to show that logical necessity is adequate to the full range of possible knowledge and demonstrative or cognitive deductions. The complexity of a set of premisses is not a barrier to the deduction because a complex set is held to be qualitatively the same as a series of simple inferences, so that nothing of the sense of the complex set is lost when it is analysed and re-expressed as a series of simple inferences.

Such an argument for the completeness of a syllogistic may provide clues for defending the validity of poetic syllogisms. However, it is not clear that the analogies with poetic syllogisms are strong enough to warrant poetic validity. There do not seem to be clear principles operating in poetics, and the ability to simplify complex inferences into a series of simple ones seems inappropriate in poetry.[37] Because poetic sense is cumulative and synthetic rather than analytic, we cannot assume that everything that follows from a complex combination of terms will also follow from a series of simpler constructions. Nuances and meanings are generated by complex constructions and are frequently lost on being translated into simpler constructions.

In spite of such differences, we can defend Ibn Sina's poetic syllogistic against the threat of incompleteness. The poetic syllogistic

[36] *Remarks and Admonitions: Logic*, 134–43, where Ibn Sina shows how proofs must depend on the first figure; 118–28, where he sets out the different kinds of premisses or propositions; and 148–53, where he explains the operation of syllogistic proofs. To demonstrate that the universal premisses are ultimately necessary ones and must depend on axioms, we can turn to the *Metaphysics*, where, as we saw, Ibn Sina argued that all thought must depend on the categories and the principles of logic. Any argument must rest on axioms and principles because all thought must do so.

[37] For problems with reducing a set of complex premisses into a series of simple ones, see T. Smiley, 'What is a Syllogism?', *Journal of Philosophical Logic*, 2 (1972), 136–54.

does not claim completeness in the same way, but poetry does provide grounds for satisfactory agreement. Instead of guaranteeing that proofs are finite simply by pointing to basic principles or by identifying axioms in poetic syllogisms, Ibn Sina proposes that the construction of meanings in figurative language involves a relation between terms that, when it is harmonious, occasions pleasure when we grasp it. Thus, in the poetic syllogism, in spite of the absence of principles and axioms, the pleasure occasioned by harmony serves to guard against incompleteness by showing that its forms and terms must be finite. Just as logical necessity would be inadequate if we could never be sure that the proofs were finite and capable of being completed, similarly, if a figurative use of language involved so complex a set of terms that its mix were infinite, then we could have no certainty that the meaning which resulted from using the poetic syllogistic forms was adequate to all the possibilities in that mix of terms, and a grasp of meanings that depended on using those forms could never be known to be successful. But, just as, among other things, we pointed to the basis of logical proofs in axioms to show that the proofs must be finite, similarly, we may point to the occurrence of pleasure to argue that there is a limit to the terms and premisses involved in a poetic syllogism, for the terms are related in a harmony that occasions pleasure and wonder. As pleasure depends on the grasp of meanings, and assuming that we cannot hold an infinite number of terms in balance,[38] the occurrence of pleasure serves to show that the mix of terms is not infinite and that the threat of incompleteness is dissolved. Here, a harmony between infinite numbers of elements is an implausible event: a harmony, or balance, presupposes some sense of a whole, so that the elements can be held in relation within the whole and found to have a harmony. The existence of an infinite number of elements would at best render partial or temporary any claim to have gained a balance between elements.

In this context, wonder in assenting to premisses also puts a limit on the openness of poetic syllogisms.[39] For poetic syllogisms cannot be proven indefinitely, as if, whenever we came to some premisses, it

[38] It is appropriate to say that Aristotle defends the same claim indirectly in his *Metaphysics* by arguing that nature is such that it could never be open to infinite predication. Therefore it is unnecessary to defend syllogisms against the possibility of predication because the possibility could not arise in our dealings with nature.

[39] In *Remarks and Admonitions: Logic*, 127–8, Ibn Sina asserts that our assent to poetic premisses gives rise to a feeling of wonder. See also his *Commentary on the* Poetics *of Aristotle*, 61–8.

could be supposed that the premiss must be capable of being clarified further. If such were the case, then again, any syllogism would be unsure of completeness because it would extend infinitely in the direction of its increasingly detailed premisses. The occurrence of wonder, as a result of assent to premisses, so to speak puts a stop to that infinite regress because wonder itself signals our acceptance of the premisses. There is no need then to look for further support for that premiss from more detailed premisses. Further Ibn Sina's association of pleasure and harmony between poetic elements is explained by pointing to the origins of pleasure in the soul.[40] Such an association has a long history, extending from classical to modern times. Ibn Sina is not the first nor the last to make it, and the best defence of the claim that harmony is pleasurable is that it allows us to juxtapose and organize our numerous insights about aesthetic activity and response into a comprehensive theory. Thus, we could use the coherence and comprehensiveness of the resulting theory to justify associating harmony with pleasure, rather than the link being first given a foundation for the theory to work. This will lead us to find the absence of pleasure in harmony counter-intuitive and in need of explanation by reference to obstacles in the way of appreciation, rather than to seek explanations of the presence of pleasure and awe.

Once this is accepted, then the second requirement of completeness in poetic syllogisms may also be explained through its analogy with the demonstrative syllogistic. In the case of logical necessity, it was argued that every complex set of premisses in a deduction can be reduced to a set of simple two-step deductions using one of the four syllogistic conclusions. However, this ability to simplify seems questionable in logic[41] and is surely inappropriate to literary and poetic language. Because literary and poetic sense is cumulative, and poetic nuances are gained, for example, through complexities in construction, so that aesthetic language is synthetic rather than analytic,[42] we cannot assume that everything that follows from or is suggested by a complex set of terms will also follow from or be suggested by a series of simpler constructions. And this again raises the issue of completeness: the development of metaphors may require

[40] See above and Ibn Sina's *Commentary on the* Poetics *of Aristotle*, 64, 74.

[41] Smiley, 'What is a Syllogism?'.

[42] The contrast of poetic thought with 'analytic' scientific discourse is proposed by Ibn Sina in arguing that analytic thought is the clearest and most desirable state of affairs. Cf. *Commentary on the* Poetics *of Aristotle*, 115.

a complex combination of terms that cannot be reduced to simpler constructions which, without any loss of overall meaning, can then be grasped by using one of the five forms of poetic syllogistic. That is, the syllogistic may be unreliable because the syllogistic forms may be unable to preserve the sense of a set of complex combinations.

The answer to this problem is put forward when Ibn Sina identifies the themes guiding the deployment of figurative language. He writes that 'every theme [has] its particular measure, and each measure was given a name . . . One of these kinds of poetry was called *tragedy*. It has an exquisite and pleasant measure and contains the commemoration of goodness, moral excellence, and the outstanding traits.'[43] Other themes include dithyramb, comedy, iambic, drama, didactic, *Anthus*, heroic epic, satyric, *poemata*, *Amphi geneseōs*, and acoustic. More than rules for constructing figurative language, these embody something about the ways figurative or poetic conclusions are gained. Just as all proofs of logic must be simplified into two-step versions of syllogistic forms, so all figurative language must involve, first, the five forms of poetic syllogistic, which articulate contrastive and proportional relations between terms, and second, the five forms must be deployed in ways which give rise to one of the above themes. So, even if there is no guarantee that the terms in a poetic syllogism are capable of being simplified, they are still amenable to being organized by showing which themes are their guiding principles. To say that every theme has its own measure and name is for Ibn Sina to say that its relation of terms instantiates the use of particular poetic syllogistic forms. So, tragedy uses musical notes for 'lamentation and elegy' and involves associated contrasts and proportions, which differ from the sorts of proportion and contrast appropriate to comedy.[44] And just as simplification to syllogistic forms guarded against the threat of incompleteness, similarly, the deployment of themes having a basis in the poetic syllogistic forms guards against the threat of incompleteness by determining whether combinations of terms are appropriate or adequate.

This role of themes may be criticized generally and in particular in Ibn Sina's use. Generally, it seems to fail to establish that we shall always be able to understand figurative language because it does not show that or how themes result from poetic syllogisms and it does not show that no other themes are possible. For if other themes are

[43] *Commentary on the* Poetics *of Aristotle*, 66–8.

[44] Ibid. 74.

possible, then the ones picked out will not serve to organize all possible combinations of terms; and if they do not rest on the syllogistic form, the latter cannot be known to be the basis for all combinations of terms. That is, the proofs offered in such syllogistic forms and themes fail to be infinite and complete because, first, the number of themes cannot be restricted without curtailing the senses we may gain by inventing and using new figures of speech and language—therefore it disallows creativity. Second, the relation of theme to syllogistic form has not been shown to be determinate, and we need a further account of proof here, to know that the given uses of language belong to one theme rather than another.

However, these objections fail against the claims made by Ibn Sina. We want to include poetic syllogisms within the bounds of rational activity, and to the first objection need only reply that though the themes pursued may change, and new ones may be developed, to decide whether putative cases *are* poetic themes we only need to give reasons, defend our claims, and accept or reject their status on reasonable grounds. The characterization of themes *is* open to argument, but this defence of poetic syllogisms by defence of themes need not itself be a matter of poetry. So of course the development of new themes cannot be excluded, but unless it is argued that new themes are incapable of justification and will depend on something other than the five syllogistic forms, this defence need not refute the completeness of the poetic syllogistic nor show that its forms are vacuous. There is neither circularity nor contradiction in arguing that poetic syllogisms must have completeness because they rest on themes which organize the products of the five forms of poetic syllogistic, and then accepting that the themes are open to rational defence and development. We can add to the number of themes, perhaps by identifying a 'post-tragic epic', but this addition must be defended by argument, and it does not detract from the validity of the syllogistic. The themes and forms, once established by the given rules, will exhaust all figurative language, and so a poetic syllogism can claim validity because its order can be defended. Although we can establish new themes, arguing that something formerly found irrelevant can be incorporated into consideration as an organizing principle, still we are not establishing a new status for themes by doing this, and the character of the order gained by syllogistic forms and themes—their logical status—remains unchanged. And the syllogistic can be complete.

We may still question the assumption that new and old themes are dependent on the five syllogistic forms. The relation of theme to form presumably differs from that between syllogistic forms and the terms used in figurative language. Yet it is far from clear in Ibn Sina's writings on the *Poetics* what their relation is taken to be; and if there is a determinate relation between forms and themes, then again the creative development of new themes would seem to be made impossible. If so, then either we have only a restrictive sense of creativity or using the themes does not ensure that all possible senses of the relation of terms have been grasped. And if the latter is the case then we have failed to defend the validity of poetic syllogistic.

It is not clear what sort of reply can be made to an objection like this except to repeat and develop what has already been said. There is an important sense in which the themes cannot be restricted without doing damage to one usual notion of creativity, and there is an important sense in which the absence of all restrictions on the development of new themes will rob us of all guarantees that the poetic syllogistic forms are exhaustive of and comprehensive over all poetic and figurative language. As a result of the latter, the syllogistic will be unable to claim validity. But there is a way to have both: to leave open the possibility of discovering new themes and also to claim that the themes we have together with the syllogistic forms we use can bring completeness to the poetic syllogistic. This possibility is realized if we argue that the discovery and justification of new themes is a rational process—that while we may add to the themes we have, we do so for good reasons. Nor does this offend against creativity. If new work is not nonsensical, it must be capable of being understood, and therefore it must satisfy reason and feeling. The suggestion is that poetic forms provide the criteria by which we judge the meaning and rationality of the aesthetic use of language. Satisfying these criteria no more suppresses creativity than a use of logic prevents us from making discoveries or inventing new arguments and reasons. In both cases, rules are imposed as a means of making communication and understanding possible. Without them we would not have creative work but only nonsense. Of course, this leaves us the task of explaining how a theme is related to and defined in terms of the poetic forms. But this task calls for the account to be developed further, it does not serve as an objection to the analysis we have given of the nature and status of aesthetic use of language by identifying and justifying the nature of poetic syllogisms. What we have done is to show that the poetic syllogism can claim

completeness and validity against the objections set out above. That was our principal intention; what we have seen is that some other issues are raised by that defence of the syllogism, including the task of explaining the relation of theme to form. The need to carry out this task does not constitute an objection; and so it is also a task that may be left for another occasion.

In summary: we began by comparing demonstrative and poetic syllogisms to see whether the first yielded any clues for defending the validity of the second. For Aristotle and Ibn Sina, logical necessity was obvious and primitive, and it lacked and did not need any more basic underlying principles that justified its validity. However, an indirect defence of validity *was* mounted by arguing against attacks that questioned the adequacy of the four syllogistic forms in which the basis of logical validity was expressed. These attacks held that the four syllogistic forms could not be relied upon because we could not know that they included every principle of valid inference. There is an infinite number of non-formal deductions possible, some with very complex sets of premisses, and unless we have some guarantee that the syllogistic forms are able to order every possible non-formal and formal deduction we could not comfortably suppose that a proof-procedure using the four forms had grasped all the logical possibilities contained in its premisses. To defend the validity of this syllogistic, Ibn Sina denied that the complexity or possible infinitude of the number of premisses could be used as objections against the claim to have identified logical validity and its forms.

That brief presentation and defence of the syllogism provided a model for understanding the validity of poetic syllogisms. In a similar move, Ibn Sina first exhibits the five forms of the poetic syllogistic. However, he could not then provide for these syllogisms the defence given to their parallel case because poetic syllogisms had a distinctive character. Poetic meanings are cumulative, and the sense gained from a complex of terms is unlikely to be preserved if we try to translate the complex into a series of simple meanings, perhaps constructed by applying the five forms of the poetic syllogistic. To overcome the threat of incompleteness raised here, we could construe Ibn Sina as proposing that these cumulative meanings could be ordered under various themes, and their reliability thereby preserved. Similarly, faced with the possibility that there may be no end to the relation between terms in a poetic syllogistic, Ibn Sina pointed to the pleasure

and wonder that results from our appreciation of a harmony constituted from poetic premisses and suggested that these feelings serve to limit the possibility of an infinite or endless combination of terms and resultant meanings; thereby, the experience of pleasure and wonder protects the poetic syllogistic from incompleteness, for the combination of terms to yield meanings is governed by the pleasure and wonder we feel in understanding the terms in combination.

By this account, it is important to note, pleasure and wonder are a part of the *formal* structure of the poetic syllogistic, being essential to the completeness of the syllogistic and so to its validity. These feelings are not just factors added externally or arbitrarily, but serve to show that poetic syllogisms have a distinctive nature. The nature and role of these experiences of pleasure and wonder are crucial in other ways too, for they show why arguments justifying the *logical* or *formal* validity of poetry not only involve an essential reference to the subject's *participation* in aesthetic activity nbut also bar *morally* unjustifiable content from poetry. These factors reveal important aspects of the community that is formed through aesthetic appreciation and activity. In turn, although Ibn Sina does not develop his theory in this way, they suggest that the aesthetic use of language can support a concern with truth. To see this, we must first consider the role of the subject in the aesthetic use of language.

2. Poetic validity and the subject

Analytic thought is the clearest state of reasoning. It is achieved by 'direct statement . . . made up of authentic and standard language'.[45] Its use of concepts and terms can be codified in a system of scientific reasoning. Through their use, knowledge requires compliance with the conclusion of an argument and so brings about conviction in a subject 'due to the realization that the thing is what it is said to be'.[46] Accordingly, in an important sense, logic and language compel our agreement. A subject cannot accept the premisses or grounds of evidence and the validity of an argument yet deny the conclusion without showing himself to be mistaken or irrational. The relation of premisses to conclusion holds independently of the desires and feelings of the subject, and the conclusion is one that must be acceded to by

[45] *Commentary on the* Poetics *of Aristotle*, 115. [46] Ibid. 63.

any rational and cognizant being. That is what objectivity consists in, and compliance with the conclusion of a demonstrative argument characterizes cognitive conviction. Now, Ibn Sina used this understanding of conviction, objectivity, and compulsion to show that the aesthetic use of language has a parallel way of evoking conviction. However, he also denies to this discourse a share in the cognitive interest that underlies analytic thought. Literary and poetic language 'does not pertain to understanding but rather to wonder—it makes the speech pleasant and dignified'.[47] Rather than seek true or false generalizations about 'what is recognized and immediate' in the world, the aesthetic use of language denotes our affective capacity; and it is the subjective responses of pleasure and wonder, generated in our appreciation of a harmony between elements in poetic premisses, that serve to guarantee the completeness of poetic syllogistic forms.

That it shares a comparable structure with demonstrative syllogisms shows that the result of deploying poetic syllogisms is to bring about something which is other than an expression of personal preference and more than just a feeling of pleasure. This is because in figurative language we construct meanings, and this activity is both rational and pleasurable: we are pleased with the constructed meanings when they bear a harmony between elements; and to experience that pleasure we have to exercise our reason in understanding the elements. That is, pleasure is occasioned by the rational process of comparing the meanings of terms involved, and we understand meanings, without concern for their truth or falsity but for the balance they procure. We consider only how well the balance of terms has gauged our capacity for pleasure. Accordingly, a poet's or writer's ability is assessed by his or her skill in gaining this balance through comparison, proportion, and contrast. Consonantly, the audience exhibits its sensitivity by its facility for appreciating the author's skill in constructing figurative and other meanings. The rational component of this aesthetic response, which is brought about by the syllogistic character of the construction of meanings, is the basis of our desire to gain 'imaginative' assent from others to a particular work.

That character of our response leads to the role of the subject in Ibn Sina's conception of aesthetic subjectivity. Aesthetic language is said to imitate the subject, and poetic or literary discourse is intersubjective in that it depends on generating a community of feeling, where

[47] Ibid. 115.

subjects gain a common response to works through mutually appreciable images, symbols, etc., in line with the five forms of poetic syllogistic and their themes. The subject is treated as the end of the process of production of aesthetic discourse, for the success of this language—our attaining a feeling of pleasure as a conclusion of a poetic syllogism—depends on the sensitivity of the subject. By contrast, the success of a demonstrative syllogism does not depend on the subject because it carries a rational force to which the subject must submit either because of the nature of the relation between concepts in an argument or because of the way the world is. In a poetic syllogism, the criteria for success is the subject's feeling of pleasure based on grasping the meanings of terms. Consequently, aesthetic language must carry a distinctive force. As the subject's feeling of pleasure is crucial formally to the validity of the syllogism, it provides the final ground for accepting or rejecting an aesthetic use of language. Here poetic and literary discourse imitates the person in being directed essentially at their subjective nature. Agreement can only be *given* by the subject's responding to a poem in the appropriate way, for the ultimate ground for their appreciation of a poem is their own experience of pleasure. Only the occurrence of the feeling will allow the subject to succeed in appreciating an aesthetic use of language, and only the occurrence of the feeling of pleasure can validate agreement or assent to the aesthetic use of language. A subject appreciates a work when he or she has the appropriate feeling in response, not when someone else does so. So, the occasioning of pleasure in one subject cannot be the basis for accepting or rejecting another's claim for the aesthetic use of language. Accordingly, one subject cannot assert of another that, on the basis of *his* feelings, *she* should appreciate a piece of literary or poetic discourse. Similarly, she cannot dismiss his claims as false on the basis of her lack of pleasure. Only the subject's own feelings are the basis for his or her own judgements; the feelings do not validate any claims about others' responses, which those others must have for themselves, individually. Discussion may occur here, of course, but because of the subjective nature of conviction, it can only succeed by persuading another subject, perhaps by pointing to features and nuances he or she may have missed or misunderstood, that it is appropriate to feel pleasure. Subjects must be treated as rational and feeling beings, who can only independently *give* assent to a work when they feel pleasure. Thus, poetry is intersubjective in the dual sense of depending on the sub-

ject's common feelings and of having to treat the subject as he or she is in rational, emotional, and affective nature.

If the above shows us one of the implications of a subjective aesthetic validity, the emphasis on the subject's independence and essential contribution to constituting aesthetic discourse has other implications. Both the role of the subject and the validity of the poetic syllogisms go to show why aesthetic validity cannot be distinguished completely from moral validity or a validity gained from truth. That is, having understood how aesthetic validity is justified, and having seen that this validity involves a necessary reference to the subject and its experience of pleasure, we can now go on to explain why this guarantees moral approbation.

3. Subjective validity and moral content

It was said that the mix of terms in figurative language could be grasped by any rational and feeling subject so that his or her responses were valid. However, there is supposed to be another element, having to do with the actual content of the poem: the latter may be suitable or not for some other non-formal reason. So, for example, the form of a love-poem invites its author to be deeply frank about his feelings. But while such honesty remains decorous when the subject is love, it may be completely indecorous when the topic is lust, and the poem may be rejected by its audience for its immoral content even though the formal structure of the poem, the facility with which the author gives expression to the convolutions of sense and emotion wrought by lust, and the order of ideas, images, and thoughts are all excellent. Accordingly, by this conception of Arabic poetry, there are two grounds for validity, one formal and poetic, the other moral and governing the content. The first is a restriction that makes a poem a poem, the second a restriction that makes the poem acceptable in polite society.

Fortunately for the power and range of Arabic poetry, these restrictions are more Victorian than medieval. Nor do they correspond with Ibn Sina's account of poetic validity. First, the poetic syllogism, which is the source of poetic validity, is made up of terms in relation such that their meaning *is* what is yielded by their relation. It is not as if there is some independent content which is then given a certain form. The 'content' is intransitive in that we cannot suppose that it is always capable of being paraphrased into some other context without any loss

of meaning. Rather, the two—form and meaning—are interdependent and do not need two separate and independent justifications. Pleasure in aesthetic discourse is occasioned by the rational process of comparing meanings to grasp the sense that develops, and this pleasure is a part of the 'formal' character of aesthetic discourese. As it is gained through appreciating the harmony between terms, and these are, so to speak, meaningful words and expressions, consequently, where the occurrence of pleasure is essential to the validity of these forms of the poetic syllogistic, there we may expect that the meanings or sense also are essential to the formal validity of the aesthetic discourse using that poetic syllogistic. And it is difficult to see what room there is, in this description, for a distinction between poetic validity and a content where the latter is supposed to be a matter that is given a separate validity.

Such an argument leaves open issues of moral justification and decorum; for it is possible to claim that so long as there are meanings involved, they invite moral approbation or blame. However, the account we have given of the role of the subject and the pecular intersubjective validity of poetry should already suggest why the proposed picture of deploying moral *or* logical validity, where the first might lead us to reject a work even though it satisfies all the requirements of the second, or vice versa, must be an artifical description. There cannot really be a conflict between moral and aesthetic validity because the basis of validity in the subject's experience of pleasure precludes us from knowingly entertaining immoralities in an aesthetic work. Moreover, this is a *formal* requirement, not a separate moral one. Of course we must explain this further.

To argue for the general relation between moral and poetic validity, we can claim that it leads us to preclude immorality from a beautiful poem because evil may not be poetically beautiful: evil cannot garner that pleasurable awe which is part of the formal character of poems, and so its presence would preclude poetic validity. To explain: evil will be an imbalance; it will involve not only a rejection of the mean and balance which constitute a moral life but will also result in a commensurate stress on some one aspect over others. As an imbalance, evil serves to exclude or mis-stress some feature of ourselves. Because it sustains an emphasis on only some aspects, it cannot account for all the qualities whose possession makes us virtuous human beings. Moreover, the sense of moral balance, involving subjects in maintaining a mean in their moral personalities, can be construed as denoting a

society or group of individuals—as a collection of personalities possessing appropriate moral balances, engaged in moral relations with each other, under the influence of a lawgiver,[48] to constitute a Virtuous City. Ibn Sina speaks of this in terms of 'partnership' and of the existence of a community being necessary for individual existence.[49] Conversely, the evil rejection of a mean is also the rejection of the virtuous city or an exclusion from the moral society. Moreover, the persons who are citizens of the virtuous city are also the subjects who give assent to the beauty of poems. And these factors make it impossible for an evil lack of balance to evoke pleasure in the way necessary to valid aesthetic pleasure. For an evil poem would be morally imbalanced yet have to procure an aesthetically pleasing balance or harmony between terms. But given Ibn Sina's theory, this could not obtain, for this pleasure—the aesthetic assent or conviction necessary for a valid poetic syllogism—has to be *given* by the subject; yet the partial stresses in an evil poem will connote a description of society which is divisive and which excludes people from the moral mean or is itself excluded from the moral mean; but those people who are excluded by the evil poem are also the ones who must appreciate it and constitute its poetic value by grasping its meaning and *giving* assent. That is, to find this kind of poem beautiful, they would have to thwart their own participation in the community *just when they give assent to the poem*. In other words, a beautiful but evil poem would be self-defeating: by this account, 'beautiful evil', so to speak, is an oxymoron and implicates self-defeating or contradictory behaviour. These points can be set out somewhat more systematically as follows.

As we have asserted, virtue and good are understood in terms of a mean or balance. 'The mean in morals or customs is sought for two things. The one, involving the breaking of the dominance of the passions, is for the soul's purification and for enabling it to acquire the power of self-mastery so that it can liberate itself from the body untarnished. The other, involving the use of these passions, is for worldly interest.'[50] The mean involves both a balance between reason and the passions, where self-mastery depends on controlling the

[48] See *Metaphysics*, bk. 10. [49] Ibid.

[50] 'Healing: Metaphysics X', in Ralph Lerner and Muhsin Mahdi (eds.), *Medieval Political Philosophy: A Sourcebook* (New York, 1963), 110. It is of interest also that Ibn Sina describes this process of gaining balance in terms of purification, for the latter is the sense Aristotle gives to *katharsis* in the passage from the *Politics* which we have cited above.

passions, and a hierarchy where passions serve the pursuit of virtue. This balance can be disrupted by an excess of passion or by an excessive pursuit of self-mastery. The latter seems to occur when virtue, as wisdom, is misunderstood as a matter of theoretical knowledge. Ibn Sina rejects such misidentification as 'it is deception to concentrate on the knowledge of this wisdom'. Theoretical wisdom does not involve any mean; it is only in practical wisdom, 'in worldly actions and behaviour', that we need criteria for relating particular actions and their consequences to each other and to their source in reason and passion. To treat practical wisdom as if it were theoretical knowledge is to abjure all reliance on a mean and to concern ourselves only with gaining ends for ourselves. But this results in our 'carefully guarding the ingenuous ways whereby one can attain through it every benefit and avoid every harm, to the extent that this would result in bringing upon one's associate the opposite of what one seeks for onself'.[51]

Ibn Sina's claims here seem to depend on exploiting the relation between concepts of 'individual', 'self', and 'selfishness'. That is, given that virtue is a balance between reason and passion, if we treat self-mastery as a matter of theory, which involves no sense of a mean, we are also led to look without qualification or constraint for ways to gain whatever is defined as the self. But this has an unfortunate consequence, for self-mastery in the sense of freeing the self from the control of the passions, where it seeks to promote this *self* over the passions, also becomes a matter of promoting *this* self *per se* as defined by reference to or against subjective, individual passions *and* against other selves. That is, this self is defined by being counterpoised to subjective passions, and so is still understood in terms of the subjective individual; but further, it is also distinguished from other selves and objects as the only self whose fulfilment it understands, desires, or pursues. In pursuing such self-mastery, we lose sight of the use of 'these passions ... for worldly interests', and lose our commensurate pursuit of virtue as a balance within individuals or with other selves. Thus, a natural result of treating virtue as a part of theoretical knowledge is that of 'distracting oneself from the attainment of other virtues'. To so 'cause the hand ... to be fettered to the neck', Ibn Sina writes, 'means the loss of a man's soul, his whole life, the instrument of his well-being'.[52]

[51] 'Healing: Metaphysics X', 110. [52] Ibid.

Moreover, Ibn Sina makes clear what virtue consists of in the case of our motivating powers. These latter are the source of action and so part of the domain of practical reason. In the case of each power, moderation or balance in harmony with others is of paramount importance, and he writes that since 'the motivating powers are three—the appetitive, the irascible, and the *practical*—the virtue consists of three things: (1) moderation in such appetites as the pleasures of sex, food, clothing, comfort, and other pleasures in the sense and imagination; (2) moderation in all irascible passions such as fear, anger, pride, hate, jealousy, and the like; (3) *moderation in practical matters*'.[53] And while the details of Ibn Sina's position call for further analysis, for our purposes it is enough to note that individual virtue is seen as a matter of balance—that we seek a mean that will allow us to continue to seek other virtues.

This conception of virtue, as a mean or balance denoting the individual, is related to that of community. Ibn Sina goes on to clarify how our individual concern with attaining virtues is committed also to seeking a proper balance between individuals. When we misunderstand virtue as theoretical wisdom, we are led to bring 'upon one's associates the *opposite* of what one seeks for oneself'.[54] The result of treating others in this way is that we are distracted from 'the attainment of other virtues'. By contrast, a correct understanding of practical wisdom as 'pertaining to actions and behaviour' leads us to understand the latter in their public character, but so far as they have consequences for the individual, and so far as his actions and behaviour support or disrupt the individual's relation to the community. Indeed, 'man cannot lead a proper life when isolated as a single individual . . . One man needs to be complemented by another of his species, the other, in turn, by him, and one like him . . . For this reason men have found it necessary to establish cities and form associations.'[55] Humans need each other to confirm and promote their humanity, it seems, and Ibn Sina goes on to identify such associations as 'partnerships' that are 'only achieved through reciprocal transactions' which demand 'justice'; and justice, we know, is the mean regulating transactions between individuals.[56]

These last few claims are vital to understanding Ibn Sina's conception of the individual. The claim that 'partnerships' are '*only*

[53] Ibid. [54] Ibid. (emphasis added).
[55] Ibid., ch. 2, p. 99. [56] Ibid. 110.

achieved through *reciprocal* transactions'[57] suggests that the relation to other individuals in a community is necessary to individual human development and fulfilment. We have found it necessary to form associations because in their absence, where we fail to be complemented by others like ourselves, we also fail to be our human selves. Without reducing the individual to the community or vice versa, Ibn Sina is proposing that a particular kind of relation between individuals is essential to our own humanity. The importance of these claims will become clearer later. In any case, the upshot of the claims, when related to those made for self-mastery, is that virtue implicates two interrelated balances, one within the individual, by which he seeks self-mastery and frees himself to pursue virtues, and another, by which individuals are related to each other in just transactions and so maintain a balanced or virtuous city. For Ibn Sina, then, the good life is a balanced individual living well in a just society.

If this outline makes clearer Ibn Sina's conception of the nature of virtue as a mean, it also shows that its balance involves diverse elements both within and among individuals, and so includes a heterogeneity such that the balance between elements is best described as a harmony of all those elements. By contrast, then, vice is generally an imbalance or a disharmony in the individual or in his relation to others. Given that we are dealing with a public realm of action and behaviour, evil must involve either intentionally rejecting or ignorantly subverting that harmony. Whether through intentional action or ignorant behaviour, Ibn Sina proposes, the resulting evil is either an excess which disrupts the individual's balance or a deficiency that disrupts the just relation between individuals. That is, the 'vices of excess are to be avoided for the harm they inflict in human interests, while the vices of deficiency are to be avoided for the harm they cause the city'.[58] An excess of passion threatens self-mastery; while deficiencies of passion or reason, where practical reason is substituted by theoretical knowlege, disrupt the balance proper to a good life and so lead to evil.

In this context, to identify anything as evil is to denote the individual and social disharmony that it subtends. Accordingly, to describe a poem as evil or vicious is to claim that it causes or is suited to a social or individual disharmony. And given that a poem is structured by a logically valid relation between terms, in an evil poem

[57] 'Healing: Metaphysics X', 110 (emphasis added). [58] Ibid.

the relation of its terms leads to or is suited to social and individual disharmony.[59] And the last claim serves as the first step of Ibn Sina's argument: that a poem is evil when it depends on or generates an individual or social imbalance.

As Ibn Sina's second premiss, we may reiterate the conclusion arrived at earlier, when it was proposed that poetic syllogisms succeed where subjects *give* assent through an experience of pleasure in the balance and harmony of terms in the poem. This pleasure depends on the subject—or is subjective—yet it is not arbitrary. It is part of the formal structure of the poetic syllogism, where it plays the role equivalent to the one assigned to conviction in a demonstrative syllogism, and so has a validity that makes it more than an expression of personal preference. Nevertheless, because pleasure is an experience which only the subject can have for himself, it retains a subjective character and, further, just because it is so closely tied to the individual, no other thing or person can be substituted for it. Only the subject can experience pleasure for himself, and so far as the occurrence of pleasure signals the success of a poetic syllogism, this success is made possible only by the subject *assenting* to the syllogism by having that experience of pleasure.

This experience of pleasure also fails to be idiosyncratic or arbitrary for other reasons. As the third step of the argument, we may reaffirm that pleasure in poetic syllogisms has a rational component in depending on understanding the terms and their relation in the syllogism. Figurative or poetic language may be subjective because it depends on the subjects' experience of pleasure, but pleasure is far from being some automatic or blind reflex. It was seen to depend on the relation between terms when these were considered for the harmony between them rather than, for example, for their correspondence to reality. Thus, assent as pleasure involves a reasonable procedure in which terms and their balances are understood to be appreciated. And this third claim, together with the two earlier ones, should lead us to deny that a beautiful poem can also be evil. This conclusion depends on certain suppositions about the role of the subject's activity, and may be explained as follows.

If the poem, first, is evil because the terms which it contains

[59] Of course, such disharmony as the evil poem possesses need not be identifiable with any *aesthetic* dissonance in the relation between terms in the poem. However, if the claims we shall go on to present for Ibn Sina are plausible, then we shall show that an aesthetic dissonance depends on or determines an individual or social disharmony.

generate or depend on a social or individual disharmony and, second, if our aesthetic response is a matter of pleasure, in the balance of its terms through which we give assent to the poetic syllogistic which the poem contains, and, third, if we must understand the terms in order to appreciate their balance and to assent to their poem, then, fourth, a poem containing individual or social disharmonies will be unable to generate pleasure in the balance of terms because the individuals who are excluded from the disharmonious social or individual order will be unable to give assent to the poem's relation of terms, which, by hypothesis, denotes a disharmonious order that excludes those very subjects on whose assent it depends in order to be successful. In other words, an evil poem cannot expect to gain some balanced subjects' assent *without also* confirming their exclusion from its society just when they give that assent. Those individuals will render their own participation in the disharmonious social group vacuous by assenting to the disharmonious order denoted by that poem. Yet if these subjects' assent is vacuous, then the poem cannot be beautiful, for its beauty is constituted by subjects assenting to its order and relation of terms. Thus, the poem is successful where it gains assent; but an evil poem can be assented to only by also making vacuous the balanced subjects' assent because the poem excludes, from the disharmonious relations subtended by the evil poem, those balanced subjects who would give assent in order to make it beautiful, and thereby it also excludes their assent. That is, we must suppose that the balance of terms in a poem can generate a pleasurable response if it is beautiful; yet, if the poem is evil, and it lacks balance because it is evil, then it cannot gain the assent of subjects so far as the latter are also excluded from the society implicated by the poem. If they are excluded, it becomes impossible to find the work beautiful by giving assent, for if they cannot give assent, the work cannot be said to be beautiful as its beauty is constituted by the subjects' response. Conversely, where subjects assent to an evil poem, there they exclude themselves from the virtuous community, and so make their assent vacuous. Only a balance of terms that is compatible with a virtuous balance will be able to avoid divisiveness among subjects and so be able to seek and gain the pleasurable assent of every member of the community. And if it lacks a procedure for gaining assent from all, then it cannot clearly be said to be beautiful. Or so it may be argued.

However, the claims made above may be questioned as follows. The association between moral and political validity that is being

proposed here depends on the role of the subject, who both embodies a moral mean and gives assent to poetic syllogisms. Because the same subject is involved in both activities, it seems, and as both activities involve a balance, it is argued that the balance procured in the case of virtue must determine that gained in the case of poetic validity. Consequently, the claim is, the subject will not assent to the balance of terms that constitutes aesthetic validity if it means thereby excluding himself from the balance of, or introducing an evil element into, the virtuous community. But against this claim we may argue that it merely conflates the assent given to the poetic syllogism, by which a subject participates in an aesthetic community, and the balance within and between subjects that is procured in the moral community of a virtuous city. The considerations which underlie imaginative assent need not necessarily bear any relation to moral balances. A subject may assent to a poetic syllogism by grasping the harmony of terms in a poem without thereby adopting the virtuous mean, and so without considering whether the poem is evil. As the criteria for poetic and moral validity are distinct, a subject may or may not participate in both communities. Just because a set of subjects happens to form a moral community, it does not follow that any related aesthetic community *must* incorporate the same set of subjects. The extent and nature of either community will be determined by the kind of validity it depends on, and which subjects accede to, and will not be decided by who happens to be involved. That is, an aesthetic community formed by subjects on the basis of assent to the harmony of terms in works need not coincide with the community of moral, balanced subjects in the virtuous city, even though some of the same subjects may be involved in both communities. Here, the fact that *subjects give* assent in the case of poetic validity is idle, for they give assent on the basis of poetic validity, which is when such assent can be asked of them, and do not give or withhold it on moral grounds. What is important is the validity that is claimed for the poem through assent, it is not important who gives this assent. The fact that *subjects* give assent does not justify the validity that is claimed through giving assent, and so does not warrant any implication that if we value assent we should also value everything about the actual or potential assenters, including their moral character. In other words, the nature and scope of poetic validity determine the range and nature of membership in the poetic community that it subtends, it is not the case that the nature of the community determines the scope of poetic

validity. Thus, considerations of morality or moral balance do not enter into imaginative assent to poetic syllogisms, and we may seek persons' imaginative assent in spite of such assent being incompatible with or possibly opposed to the virtuous mean. This may be explained further in the following way.

According to this account, aesthetic and moral communities are distinctive in validity and scope. Such a distinction allows us to talk of validity as requiring assent without concerning ourselves with the question of who is the source of assent, and so without concerning ourselves with the moral community. For example, this separation between morality and aesthetics could obtain in the use of metaphors in a poem. Faced with a metaphor like 'the evening of life', an audience would be struck by its juxtaposition of the span of day and of life, and the metaphor might be used in a poem which presents a sense of calm and repose that informs old age. It could then be urged that to appreciate the poem we must first grasp its terms and their relation, and that this understanding is separate from the feeling of pleasure by which we assent to the poem. Moreover, we can appreciate the poem by assenting to it without concerning ourselves with the moral balance or imbalance that might be connoted by this treatment of old age. Thus, even if the poem intends to exclude the older members of its putative audience, relegating them to a political limbo by stressing their need for calm, inactivity, and rest, and regardless of whether we find this relegation immoral, we may still grasp and assent to the poem for its successful syllogistic. Further, an evil but beautiful poem works in much the same way; its poetic validity holds in spite of and separately from any moral condemnation we may level against it. Even if evil is a matter of excluding individuals from the moral community, that exclusion is separate from their participation in the poetic community subtended by the poem because of its beauty. Even if they are excluded from the moral community, they may still assent to the poetic validity involved. Thus, there can be beauty that is evil.

For Ibn Sina we may argue against this objection that because it misunderstands the role of the subject and its assent in determining validity it also fails to appreciate the relation between moral and poetic validity that he wants to establish. The objection was that poetic and moral validity depended on distinctive criteria, and so each could be gained independently of its counterpart. Moreover, the subject's involvement in poetic validity, it was argued, was idle in an important sense, for the subject became important only as *source of*

assent to given criteria while a poem was valid where it satisfied certain criteria, and its validity was not dependent on who gave assent to poetic syllogisms. Consequently, the scope of the aesthetic community, which is a claim about who are its members, was decided by the force and nature of poetic validity, rather than its validity being determined by considering whether all the members of a given community gave assent. But this objection misunderstands the role of giving assent in constituting poetic validity. First, for Ibn Sina we might argue that giving assent is not contingent on or external to validity, as if we had a procedure by which we recognized a successful poetic syllogism claiming validity, and a separate procedure where a subject assented to the syllogism by feeling pleasure. Instead, for Ibn Sina, this kind of separation cannot obtain: the meaning of the poem is constituted by its poetic syllogism, which in turn is successful when it occasions pleasure and so leads us to give imaginative assent. There is no sense of 'understanding the meaning of a poem' that can be both separated from imaginative assent yet also given poetic validity, for by giving assent we constitute the poem with its terms, their interrelation, and their meanings.

Second, to give imaginative assent is to feel pleasure in the order and relation of elements, and this pleasure is subjective in the sense that only the subject can feel it for himself or herself. The fact that others do or do not feel pleasure forms no ground for the subject's own response. Yet if this pleasure and assent are vital to the success of a syllogism, and that pleasure involves the subject necessarily, then consideration of the validity of any poem cannot exclude consideration of the subject who gives assent. In this sense, the poem subtends its own community. Given that the subject is necessary to assent and so to validity, only if reference to the subject is not vacuous or idle can we describe the poem as having validity. Consequently, the subject and his or her assent go to constitute the aesthetic community, and so must belong to it if we are to have that poem at all. In other words, we do not first identify poetic validity by certain criteria and then find ourselves constrained to assent to it, so that those who do feel constrained in this way also participate in the aesthetic community. Rather, there is no poem or community except where subjects participate through pleasure and assent.

Third, in distinguishing Arabic from Greek poetry, Ibn Sina also makes clear that he thinks the 'whole' person is involved in assenting to poetic syllogisms. Thus, the subject's participation in the aesthetic

community brings in considerations of his moral and other qualities. Given that we cannot simply emphasize some parts of the subject's faculties over others when we explain how the poetic syllogism is constituted, as we might have done in understanding Greek poetry, there is also no clear distinction to be made between, say, the aesthetic and moral communities on the basis of which faculties of the subject participate in each community. In both cases the same subject is involved. This is not to say that no distinction can be made between moral and aesthetic validity, for the second depends on agreement gained on the basis of experiences of pleasure while the first depends on agreement over what should be, but it does say that for Ibn Sina the distinction cannot be made by reference to the different faculties of the subject. Moreover, given that the subject who constitutes the valid poetic syllogism in turn is constrained by a moral and social balance, the latter will determine the parameters within which the former may be constituted. And these parameters are those of a just society, for a 'man cannot lead a proper life when isolated as a single individual', but 'needs to be complemented by others' in order to affirm and promote his own humanity.[60] Therefore he cannot consent to an evil poem, for by doing so he will not only exclude himself from the community because he will thwart his participation in the moral balance, but he will also thereby make his assent or pleasure vacuous because he will fail to affirm or promote his own humanity. This needs further explanation.

To clarify this last claim further, we can develop some features of the concept of evil. We suppose that evil tends towards so complete an imbalance and disharmony within and between individuals as to destroy the possibility of affirming the humanity of subjects. Given, first, that good is opposed to evil and, second, that Ibn Sina's account of a virtuous city, based on reciprocal transactions between partners where the pursuit of virtues is made possible, embodies what is a good life, then there is reason for defining evil negatively as the most complete impossibility of good. And that negative definition can lead us to deny the presence of balance and to affirm the presence of such excesses in individual pursuits or deficiencies in communal order as to render impossible any likelihood of gaining any virtues. But where this disorder prevails, partnership and reciprocal transactions become impossible, and at best other individuals are only used for the

[60] 'Healing: Metaphysics X', 110.

subject's own purposes. Far from being partners, other individuals are considered only in terms of how they might be useful to the subject's purposes. And to consider individuals in this way is to suppress their humanity, rendering their actions and reasons irrelevant in the sense that these are denied all independent legitimacy and are considered only in the context and terms of the evil subject's own purposes—other individuals are merely like any other objects. Consequently, any assent those individuals may wish to give to a poetic syllogistic is rendered vacuous because it has no weight or meaning in this scheme of things, for assent has none of the basis in subjectivity and in the humanity of the other that gives legitimacy to assent as valid and meaningful behaviour. Or, conversely, by giving assent to such an evil imbalance, the individual also thwarts his very ability to give assent meaningfully because he has sought to enter a scheme of things where his humanity, his substance as a subject, the basis for validity in assent, are all void. In other words, an evil poem cannot gain assent from the subjects because it excludes them just when they give it assent; but if it excludes them, then their assent is of no consequence because it cannot constitute the poem and its community. On the other hand, if their assent is included in order to gain the poem as constituted by their assent, it is no longer an evil poem. Conversely, if the subject were given to the immoral balance denoted by the evil poem, then his assent would be excluded from the virtuous and its mean. That is, an evil subject might be thought to find the poem beautiful by assenting to its disharmony. But, in this case the evil person would have excluded himself from the virtuous community because of the imbalances in himself, and his assent cannot form part of the community. In either case, then, evil and beauty do not intermix.

Of course, the partiality of terms, stresses, and their harmony need not be obvious, and may have to be explained, even to the subjects themselves. Various psychological factors may prevent subjects from seeing that the poem serves to exclude them wholly, so that the assent they may be tempted to give thwarts their participation in the virtuous community. Ibn Sina's argument suggests that we can make mistakes in these cases, and that error can be explained to a subject. But the refusal to reduce poetic validity to moral validity, in spite of the former depending on the latter, also implies that any such explanation of the evil of a putative poem must take a particular form: it is not enough to dismiss a poem for having some evil content; it is necessary to argue

also that the immoral quality exhibits an inadequacy in the *poetic* structure and validity of the poem itself. Conversely, the requirement of adequacy will exclude the kinds of poetic dissonance that are generated by immoral partial stresses.

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KAHN ON THE PRE-MIDDLE PLATONIC DIALOGUES

Comments on Charles Kahn, 'On the Relative Date of the *Gorgias* and the *Protagoras*'[1]

MARK L. McPHERRAN

PROFESSOR CHARLES KAHN has recently argued that, contrary to the traditional consensus, the *Gorgias* is (in all probability) prior to the *Protagoras* in composition. But Kahn does not limit himself to a defence of this one chronological thesis. He also attempts to show how that thesis contributes to his broader project of offering a revisionist ordering and interpretation of the entire set of Plato's pre-middle dialogues (p. 69).[2] Towards that end, Kahn offers his readers a sweeping 'error theory' (p. 70) that purports to explain how 'the best minds in Platonic scholarship over the last hundred years' could hold the 'entirely mistaken' view of the *Protagoras* as early and 'Socratic', by showing how that view 'reflects a basic misconception of the scope and intent of the early Platonic dialogues' (p. 102).

I think Kahn is most persuasive where he pursues the least ambitious

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I want to thank David Halperin for his helpful comments on an ancestor of these remarks. Whatever errors and infelicities may exist in the following pages are, naturally, entirely my own.

[1] *Oxford Studies in Ancient Philosophy*, 6 (1988), 69–102 ['Kahn'].

[2] See e.g. Kahn, 'Did Plato Write Socratic Dialogues?' ['Did Plato?'], *Classical Quarterly*, NS 31 (1981), 305–20; 'Drama and Dialectic in Plato's *Gorgias*', *Oxford Studies in Ancient Philosophy*, 1 (1983), 75–121; 'Plato's Methodology in the *Laches*', *Revue internationale de philosophie*, 40 (1986), 7–21; 'Plato's *Charmides* and the Proleptic Reading of Socratic Dialogues' ['Plato's *Charmides*'], *Journal of Philosophy*, 85/10 (1988), 541–9; and 'Plato and Socrates in the *Protagoras*' ['Plato and Socrates'], *Méthexis*; *Revista argentina de filosofía antigua*, 1 (1988), 33–52. A significant portion of the remarks that follow derive from my comments on this last paper, delivered at the conference on Methodological Approaches to Plato and his Dialogues, 21–4 Apr. 1988, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

of his tasks: a number of his criticisms of past justifications for holding the *Protagoras* to be prior to the *Gorgias* (pp. 84–9) are quite telling, and may even constitute a case for holding the dispute concerning relative chronology to be a dead heat (a position, however, that falls short of his claim to have the better-documented case). None the less, many will find Kahn's larger interpretative aims, and the methodological presuppositions they involve, even more challenging. For if he is right, a good deal of past and current scholarship is deeply flawed, and future work will have to be—at the very least—conducted in full consciousness of Kahn's revisionary thesis and the interpretative strategy it presupposes. Hence, in what follows I am going to bypass many of Kahn's individual arguments for the priority of the *Gorgias*, and focus instead on the methodological postulates underlying those arguments, and thus on the cogency of Kahn's larger enterprise. I want to show that these postulates and Kahn's application of them are seriously defective, and so undermine not just his claim to have the *more plausible* position on the relative chronology of the *Gorgias* and *Protagoras*, but his entire revisionist project as well.

On Kahn's view, Plato's pre-middle dialogues are carefully crafted, proleptic lessons in philosophy, starring an overwhelmingly *fictional* character named 'Socrates' (pp. 81–2, 99–102). Various formal and thematic factors convince Kahn that these dialogues 'fall into two distinct groups, with *Gorgias* and *Protagoras* as the principal member of each group. ... Group I consists of *Apology*, *Crito*, *Ion*, *Hippias Minor*, *Gorgias* and *Menexenus*. Group II consists of *Laches*, *Charmides*, *Euthyphro*, *Protagoras*, *Meno*, *Lysis* and *Euthydemus*. Group I as a whole is earlier than Group II' (p. 69).[3]

Professor Kahn sees two traditional 'historicist' readings of these dialogues (especially those in Group II) as rivals to his own account. The first version is the 'strict historicist' interpretation, allegedly represented by W. K. C. Guthrie and traceable back to Aristotle (pp. 97, 99–102; 'Did Plato?', 305; 'Plato and Socrates', 34–5). This view understands the dialogues of Group II to be members of the conventionally designated 'Socratic dialogues' and takes as its key methodological assumption the view that 'Plato is imaginatively recalling, in form and subtance, the conversations of his master

[3] Kahn, 'Did Plato?', 309, also divides the Group II dialogues into (A) and four 'dialogues of definition', *Laches*, *Charmides*, *Lysis*, *Euthyphro*; and (B) *Protagoras*, *Euthydemus*, and *Meno*.

without as yet adding to them any distinctive doctrines of his own.'[4] The second historicist account—the more philosophical, 'developmentalist' view—draws the Group II dialogues and other early works together under the 'Socratic' rubric by supposing that we may detect in these compositions an *early stage* in Plato's thought assigned to, or represented by, the character named 'Socrates'. This reading purports to avoid the problems of strict historicism by leaving open the question of the relation between the historical Socrates and the Socrates of any one particular text or set of dialogues. Kahn cites Gregory Vlastos and Terence Irwin as classic practitioners of this mode of interpretation ('Did Plato?', 306; 'Plato and Socrates', 35).[5]

Let me first consider Kahn's rejection of these approaches before I turn to an examination of his own positive thesis. As I do so, I want to acknowledge the need when confronting the subject of interpretation for commentators to draw rough and bold boundaries between interpretative outlooks. None the less, I am going to contend that Kahn's categories are insufficiently focused as they stand to do justice to the range and complexity of the actual interpretative possibilities posed by our texts. Moreover, I shall argue that the figures of Guthrie, Vlastos, and Irwin cannot serve as exemplars of historicism as Kahn conceives of it without distorting the methodological claims and procedures of these men.

As Kahn sees it, all the best scholarship over the last 150 years has been 'led astray' in its ordering and understanding of the early dialogues 'by two factors with which it was not equipped to deal' (p. 99): (1) the strict historicist presupposition that allegedly 'misconceives the essentially *fictional* nature' and carefree invention of the Socratic literature, as evinced by the anachronisms that show up in Aeschines, Xenophon, and Plato ('Plato and Socrates', 34; Kahn,

[4] W. K. C. Guthrie, *A History of Ancient Greek Philosophy*, iv (Cambridge, 1975), 67; quoted (but unattributed) in Kahn, 102; quoted and attributed in 'Plato and Socrates', 34. I shall follow Kahn in his use of the term 'historicism', despite its misleading connotations. Kahn's selection of this term is idiosyncratic, since in spite of the diversity of usage it has enjoyed, 'historicism' has found a generally accepted meaning: it is the view that an adequate understanding of the nature and value of something is possible only by understanding its past place and role within a process of historical development; see M. Mandelbaum, 'Historicism', in *The Encyclopedia of Philosophy* (New York and London, 1967), 22–5; cf. K. Popper, *The Poverty of Historicism* (London and Boston, 1957).

[5] But note his claim (correct, I think) that they both actually tend to combine the developmental with the [strict] historicist mode of interpretation: 'Plato and Socrates', n. 7.

99–102); and (2) the consequent failure to recognize Plato's 'uncanny ability' to create lifelike dramatic fiction (p. 100; 'Plato and Socrates', 35). Historicist scholarship, then, has failed to see that Plato's Socratic dialogues are dramatic *fictional* accounts of a primarily *fictional* Socrates; they are historical dialogues, but in the mould of the historical novel, creating the illusion of an encounter with lifelike historical personages, 'but even where the characterization may be historical, the conversations are *all* imaginary' ('Plato and Socrates', 35, emphasis added; Kahn, 99–100).[6]

I think these criticisms pertain to historicism narrowly conceived and practised. But I do not see that they are so decisive as to justify the claim that this approach is 'clearly wrong' in every case ('Plato and Socrates', 34), at least in so far as Guthrie's work is supposed to exhibit this approach, and thus in so far as we construe 'historicism' with some measure of charity. For when Guthrie speaks of Plato 'imaginatively recalling in form and substance the conversations of his master' (and Vlastos of Plato's 'imaginative recreations' of Socrates[7]), I trust that the stress is on '*imaginatively*': that is, we are to understand the scenes as dramatic, *fictionalized* reminiscences of the substance (and to some extent, the form) of historical conversations, recognizing on the one hand the limitations of memory, and on the other the transmutational power of Plato's literary creativity and philosophical aims. Should anyone think that that is the charity of a spendthrift, an examination of Guthrie's careful discussion of proper interpretative procedure for ordering the dialogues found just prior to the passage recalled above (*History of Ancient Greek Philosophy*, iv. 41–66), and his sane discussion of the historicity of the *Apology* just following (pp. 72–80), should convice him or her otherwise. Guthrie is well aware of anachronism in Plato (e.g. p. 52) and does not hold that every assertion of the character Socrates in the early dialogues is to be attributed to

[6] Here Kahn follows in the footsteps of earlier sceptics, such as J. Joël, *Geschichte der antiken Philosophie* (Tübingen, 1921); O. Gigon, *Sokrates: Sein Bild in Dichtung und Geschichte* (Berne, 1947); A.-H. Chroust, *Socrates, Man and Myth: The Two Socratic Apologies of Xenophon* (London, 1957); and A. Momigliano, *The Development of Greek Biography* (Cambridge, Mass., 1971); see e.g. Kahn, n. 53, 'Plato and Socrates', n. 5. These scholars hold *inter alia* that we know virtually nothing of the historical Socrates, and that Plato's Socratic dialogues are simply part of an entirely fictionalizing literary genre.

[7] G. Vlastos, *The Philosophy of Socrates* (Notre Dame, 1980), 1, 3. Although Vlastos has greatly modified the views expressed in this essay ('The Paradox of Socrates', first published in 1958, from a 1957 lecture), his latest work retains this commitment to 'imaginative recreation'; see esp. his recent 'Socrates', *Proceedings of the British Academy*, 74 (1988), 87–109.

the historical Socrates. Rather, he denies that there can be any 'purely' Socratic dialogues (p. 68). Even with the *Apology* Guthrie is prepared to say that Plato gave the actual apologia of Socrates a modicum of shaping and revision (p. 78). In fact, I think it is generally recognized that Guthrie was one of the first 'analytical' scholars to have really stressed the need for interpreters to pay close attention to the dramatic elements of the dialogues.

Apart from a defence of Guthrie, I want to challenge directly Kahn's view that Plato's Socratic conversations are *all* imaginary, *free* creations (pp. 82, 100; 'Plato and Socrates', 35). In the case of the *Apology*, *Crito*, and *Euthyphro*—at the very least— I think we have many good reasons for supposing that it is certainly possible, probably plausible, and even more likely than not that some of the things said by the Socrates of these texts—and especially the philosophical substance of those remarks—are reasonably accurate representations and recreations of things said by the flesh-and-blood individual himself.[8] The historicist can also concede Kahn's point that the dialogues are *free*, imaginative creations (p. 82) within a certain latitude, but neither Kahn himself, nor anyone else, I think, would want to commit himself to the view that this freedom was in every case utterly unconstrained by reference to what were supposed to be historical facts. Indeed, it seems an eminently plausible methodological hypothesis that Plato, and even Xenophon—and others writing Socratic literature within living memory of Socrates—generally would have included enough historical verisimilitude to make their subject recognizable *as* Socrates.[9]

[8] For a masterful defence of this view see Vlastos, 'Socrates'; see also e.g. the defence of the *Apology*'s value as a historical source by Guthrie, *History of Ancient Greek Philosophy*, iv. 72–80; R. E. Allen, *Socrates and Legal Obligation* (Minneapolis, 1980), 33–6; and esp. T. Brickhouse and N. Smith, *Socrates on Trial* (Princeton, 1989), sects. 1.1, 1.2. Kahn himself does not dispute the historical value of the *Apology* and *Crito* (p. 81; 'Did Plato?', 307–8), but his claim that 'we have no reason to ascribe to the historical Socrates' the 'highly original theory of tacit contract or consent' found in the *Crito* (ibid. 308) seems to me to be undermined by Xenophon's report (*Mem.* 4. 4. 4, 4. 4. 19–25) concerning Socrates' loyalty to 'unwritten laws'. Again, his claim that the *Gorgias* is un-Socratic because it focuses on a choice between the careers of politics or philosophy, a choice 'Socrates never had to face' (ibid.), is at odds with *Ap.* 31 A–32 C.

[9] Thus, I remain unconvinced that it is 'clear' that Xenophon's testimonia are primarily imaginary (Kahn, p. 100; 'Plato and Socrates', 34). I also remain unconvinced (by e.g. Vlastos, *The Philosophy of Socrates*, 3; 'Socrates', 89–90) that a large portion of Xenophon's testimony 'refutes itself' by virtue of its apologetic zeal. Even so, Vlastos does not dismiss Xenophon's testimony wholesale, but allows it the status of a confirmatory source ('Socrates', 90). On the positive value of Xenophon's testimony,

None the less, there is one problematic aspect of Guthrie's position that Kahn's critique helps to expose. In both Guthrie's formulation and elsewhere in his *History* (e.g. iv. 68) we find remarks that suggest we are to construe Plato's creative intent one-dimensionally as simply an attempt to *reproduce* the Socratic point of view and methodology as faithfully as possible and to defend the memory and mission of his master.[10] This notion—whether or not Guthrie would want to endorse it—surely overlooks other creative (though not entirely fictionalizing) and possibly overlapping interests that might have shaped Plato's composition of some of the early dialogues; for example, the desire to creatively explore and extend the views instilled in him through his contact with Socrates. More on this shortly.

Turning now to Kahn's critique of the developmentalist view, we find a charge similar to the preceding; namely, that—despite its advances over strict historicism[11]—this school still fails to take account of the essential *opacity* of the early dialogues that accrue to them in virtue of their literary art. The explanation for this, according to Kahn, is that this approach and its view of the dialogues (especially the traditional pre-*Gorgias* dating of the *Protagoras*) have been '*dominated* by two parallel assumptions': (1) that the sequence of pre-middle dialogues reflects the development of Plato's thought from discipleship to maturity; and hence (2) that his treatment of Socrates gradually changes from a *faithful portrayal* of the historical Socrates to the use of Socrates as a spokesman for Plato's own views (p. 81, emphasis added; 'Did Plato?', 310–11; 'Plato and Socrates', 35–6).

Kahn rejects the first assumption, and the second in so far as it relies upon the first. But in actual practice (and as seen below) he himself uses developmental considerations in arriving at his revisionist ordering: for example, by alleging that the more philosophically mature argumentative techniques and hedonism of the *Protagoras* argue for its post-*Gorgias* composition (pp. 91–2, 93–6; and see p. 72 for his acknowledgement of the necessity of employing some kind of

now see D. Morrison, 'On Professor Vlastos' Xenophon', *Ancient Philosophy*, 7 (1987), 9–22. It needs to be said, however, that Morrison is guilty himself on occasion of apologetic overkill—e.g. by claiming that in some respects 'Xenophon's Socrates is philosophically superior to Plato's Socrates as conceived by Vlastos, and represents a more advanced stage of spiritual development' (p. 12).

[10] Kahn explicitly criticizes this reading in 'Did Plato?', 305–8.

[11] e.g. by allowing Plato a measure of independent philosophical creativity, over and above his intent to testify to the mission of the master.

developmentalism in any interpretative approach). Moreover, Kahn's developmentalist effigies (Vlastos and Irwin) are not 'dominated' by the developmental hypothesis (1 and 2) he rejects, since their use of these assumptions is qualified and avowedly hypothetical, and they leave open the possibility that a philosophical advance between any two dialogues may represent a development wholly within the *independent* thinking of Plato rather than a development from a 'disciple Plato' to a more creatively independent philosopher.[12] Thus, like Guthrie, Kahn's developmentalist effigies do not subscribe to the view that the pre-middle dialogues give a *faithful*—meaning, in Kahn's sense, an uncritical, unshaped, completely non-fictional—portrayal of Socrates (Kahn, 76, 101).[13]

In any case, by holding both assumptions (1) and (2) to be illegitimate, Kahn alleges that the developmentalist position commits the 'fallacy of *transparency*' by proceeding on the assumption that we can *see through* the artistic surface of a dialogue into the mind of its author (ignoring, again, literary opacity). Developmentalists are guilty of this fallacy by holding that

> we can order the pre-middle dialogues to reflect the development of Plato's thought ... [implying] that he used the dialogues to clarify his own understanding of a problem. Hence, if a discussion is inconclusive we should infer that Plato had not resolved the problem in his own mind. This approach treats the dialogues as if they were a kind of philosophical notebook, in which the author records his thoughts at the moment of writing. On the contrary, ... Plato composed these works ... in order to produce a certain effect upon his readers. (Kahn, 82; cf. 'Plato and Socrates', 36; 'Did Plato?', 310.)

I think that we can agree that the secondary literature abounds with instances of this fallacy and that it is to be abjured. None the less, is this fallacy at all conceptually integral to developmentalism as Kahn defines it, and secondly, do we find scholars like Vlastos and Irwin engaging in it? On both counts, I think not. It should be clear that the

[12] Vlastos, *Philosophy of Socrates*, 1; 'Socrates', 100–1; T. Irwin, 'Reply to David L. Roochnik', in C. Griswold (ed.), *Platonic Writings, Platonic Readings* (New York, 1988), 194–9, esp. p. 195. See also Guthrie's *highly qualified* endorsement of 'the criterion of philosophical development', *History of Ancient Greek Philosophy*, iv. 46–8.

[13] Naturally, they—like Kahn—hold that the *Apology* and *Crito* 'give us our best picture of the historical Socrates as Plato saw him', and own up to the presence of Socratic biography in other, later dialogues such as the *Phaedo* (Kahn, 81). But, contrary to Kahn's allegations, Guthrie and Irwin, and especially Vlastos, all believe that the other dialogues are dramatic *fictional* accounts, although—*contra* Kahn—not of a *fictional* Socrates; on which see below.

minimal developmental view assumes only that there is a chronologically early set of dialogues written by a Plato who continued to develop as a philosopher, where a philosophical method and position are assigned to or represented by the transdialogic figure of Socrates. It is quite another thing to hold that these dialogues represent a philosophical position and method that can be *read straight off* the text as the avowed method, and especially the *position*, of the *author*. The former view could be part of a cautious and subtle interpretative strategy, whereas the latter seems hopelessly naïve, and that is one reason for supposing that neither Vlastos nor Irwin is guilty of the transparency fallacy.

Again, Vlastos and Irwin hold that the early dialogues are *imaginative recreations*, and so not necessarily *reproductions*, of the methods and doctrines of the historical Socrates.[14] On their view, the scenes depicted (excepting the *Apology*) are indeed primarily fictional: but contrary to Kahn's occasional imputations, *not always necessarily and entirely* fictional (e.g. 'Plato and Socrates', 35–6). Rather, Vlastos (at least) proceeds on the eminently reasonable assumption that the early dialogues are the product of a Plato who, in the initial stages of his philosophical career, was a convinced Socratic and so philosophized *after the manner of his teacher*, pursuing (and publicizing) through his writing the Socratic insights he had made his own.[15] Thus, on this account the early dialogues *exhibit* Socratic doctrine and method without necessarily or always involving the conscious attempt to reproduce an exact copy of them. This position in no way *excludes* the influence of Plato's artistic craftsmanship and independent philosophical intentions, and so does not hold that all the claims and positions in a text are ones *Plato* (or Socrates) was himself *committed to*.[16] A dialogue may appear to end in perplexity, but given this

[14] e.g. Vlastos, *Philosophy of Socrates*, 1; 'Socrates', 100–1; Irwin, 'Reply', 195. Note also Vlastos's 1957 remark that: 'Here ... I speak of *recreation*, not reportage', *Philosophy of Socrates*, 3.

[15] An assumption justified by the independent testimony of Aristotle (and Xenophon to some extent) to the doctrines held by the historical Socrates (cf. e.g. Vlastos, 'Socrates', 102–8). For Kahn's objections to this justification, and my reply, see below.

[16] In his most recent and extensive description of his interpretative strategy, Vlastos tells us that he makes the 'fundamental assumption' that Plato's dialogues record the development of Plato's (not Socrates') mind, with a sharp change of direction in his way of thinking marked by the *Meno* and followed by the middle dialogues. This line of thought begins, however, 'with Plato still under Socrates' spell after his death, still convinced of the essential truth of Socrates' teaching. Eager to understand it better himself and to make it known abroad, he starts writing Socratic dialogues. But ...

account of their composition, that surface perplexity need not mean to a developmentalist that Plato himself had no view on the issue at hand or that Plato had no position—and has exemplified no position— on what the position of the historical Socrates was (*contra* Kahn, 'Plato and Socrates', 36). Thus, it is well within reasonable historiographic procedures to bring to the interpretation of the early dialogues Vlastos's hypothesis that 'authentic Socratic thought survives in Plato's recreation of it' (Vlastos, 'Socrates', 108).

Of course, this interpretative approach as I have sketched it *does* make reference to the mind and thought of Plato, for it attributes to the author of the dialogues a small set of various literary and philosophical intentions (especially the intent to pursue philosophy *more Socratico*). But such attributions will be a natural feature of any reasonable and fruitful interpretative strategy concerning documents believed to have been produced *intentionally*. To use assumptions of this sort is not to be guilty *ipso facto* of the sin of transparency, either in Kahn's first sense, where one directly infers the content of Plato's thought from a 'straightforward' reading of the text (and what sort of reading is *that*, and how does one accomplish it?), or in Kahn's second sense, where one simply claims to *know* on some unspecified basis what is in Plato's mind at some interpretative juncture ('Plato and Socrates', 36–7, 50). One only has to focus on the many references scattered throughout Kahn's own papers (and not just his one self-avowed instance in 'Plato and Socrates', 50) to 'what Plato knows' and 'what Plato intends' to see just how necessary *some* sort of reference to Plato's intentionality is for any coherent and useful interpretative work to ever begin.[17] But again,

> Plato's [aim] . . . is primarily philosophical [not biographical]. This purpose could be served as well by invented conversations, as by remembered ones. Hence Plato would feel no urgency to give the protagonist of his little dramas lines which would preserve verbatim, or even in faithful paraphrase, things he may recall having heard Socrates say. He would feel no hesitation in keeping out of his text what he does recall, if it had not struck him then, or does not strike him now, as the most effective way of formulating Socrates' basic insights and vindicating their truth' ('Socrates', 100; cf. Irwin, 'Reply', 195).

[17] We are, for example, told that Plato *conceived* of certain dialogues as 'going together', and that he had 'persistent philosophical concerns' (pp. 76–81; Kahn's 'thematic unity'; on which see below); that he '*never* speaks with his own voice' ('Plato and Socrates', 36), and then—surprisingly—that in the *Gorgias* Socrates serves as the direct spokesman for Plato (ibid. 36; Kahn, 82); that with the aporetic form Plato *wants* to leave his readers in a state of instructive ignorance and that the dialogues are *designed* to have this and other effects (e.g. drawing us into philosophy, preparing our minds for the more rigorous theory yet to come, and so forth: Kahn 82; 'Plato and Socrates', 37), hence, that Plato is not *disposed* to discuss certain topics at certain points in view of his

such claims need not involve transparency in either of Kahn's senses, since none of them can simply be 'read off' the text, and none—I think—pretends to represent firm *knowledge*-claims about what Plato thinks. Rather, many simply involve interpretatively useful postulates (often independently warranted) concerning Plato's own philosophical style and intentions. And without endorsing any particular set of them here, I do want to assert that there is no fallacy *per se* in making interpretative assumptions and inferences that involve Plato's intentions.[18] In fact, Plato himself may be giving us a piece of methodological advice at *Prot.* 339 A–347 A, where he has Socrates interpret a poem by Simonides. There we may find the message that when in the course of interpretation the intention of an author *is* left unspecified or unhypothesized, every sort of interpretation becomes possible.

This brings us to the positive interpretative scheme Kahn offers as a remedy to the preceding historicist accounts, particularly in respect of the Group II dialogues. He suggests that we view these dialogues as (1) 'protreptic', i.e. 'primarily and deliberately designed' to have the impact on the reader of 'hypnotically drawing him into a philosophical thought-world'; and (2) 'proleptic', meaning that part of the effect of this impact is to reveal only gradually the structure and contents of this 'world': a dialogue is proleptic by giving us a preparatory lesson for whatever deeper discussions and more rigorous theories might yet follow.[19] For example, we are not to see the aporetic form as evidence of Plato's ignorance on the subject-matter at hand, but rather as evidence of his proleptic intention to leave *us* in a state of 'instructive ignorance' at that point, freshly motivated for taking up the pursuit of an elusive philosophical quarry.

overarching strategy in writing dialogues ('Plato and Socrates', 42; Kahn, 89–90); that Plato writes with a certain distinction clearly in view since he employs it in another dialogue ('Plato and Socrates', 40), and that he loses interest in various topics (Kahn, 80); that Plato is interested in controlling the literary impact of the dialogues (p. 80); that an abrupt transition means that *Plato* is about to introduce a new method in philosophy ('Plato and Socrates', 47); and lastly, that in the *Protagoras* Plato elaborated an elegant hedonistic theory that he himself did not believe (Kahn's self-avowed sin of transparency; 'Plato and Socrates', 49–50).

[18] As E. D. Hirsch, *The Aims of Interpretation* (Chicago, 1976), 90, puts it: 'Unless there is a powerful overriding value in disregarding an author's intention (i.e., original meaning), we who interpret as a vocation should not disregard it.' Cf. P. Juhl, *Interpretation: An Essay in the Philosophy of Literary Criticism* (Princeton, 1980).

[19] Kahn, 82; quote and paraphrase from 'Plato and Socrates', 37, 41; cf. 'Did Plato?', 307–20; 'Plato's *Charmides*', 541–9.

Aside from seeing the Group II dialogues as bound together by their common protrepticism and prolepticism, Kahn relies upon two primary characteristics for distinguishing these dialogues from his earlier Group I collection: first, their abandonment of simple direct dialogue ('mime form'); secondly, and more importantly, their clear 'thematic unity' (pp. 76–8).

I want to agree with most of the characterization of the dialogues listed in Group II as protreptic and proleptic. Thanks in part to Kahn's earlier work, it is becoming a commonplace to contend in this sort of way that the dramatic *form* as well as the straightforward content of Plato's dialogues is intrinsic to their meaning.[20] Kahn is not so radical as those who think that the philosophical content of each dialogue is wholly subordinate to Plato's dramatic purposes; for example, he does not seem to want to go so far as to say that the *Laches* is not about courage or that *every* dramatic feature of a dialogue is fraught with hidden significance.[21] Nevertheless, I take exception first to one minor feature of Kahn's characterization of the dialogues as protreptic, next, to the contrast he draws between the protreptic and proleptic view of the dialogues and the historicist points of view, and finally, to the claims surrounding his application of these characteristics to the *Gorgias* and *Protagoras*.

First, my minor quibble: it *is* surely probable that Plato deliberately designed his dialogues so as to 'draw us into a philosophical thought-world' in some sense of this phrase. Texts like the *Euthyphro* or *Protagoras* exhibit signs of a literary strategy that invites us, as mute-but-reflective third parties to the discussion, to participate to some extent in the investigation of their topic and to employ their methodology (they surely seem to be intended to be taken as models of philosophical investigation). But to say that such protrepticism is their *primary* function goes much further beyond the evidence than does this acknowledgement of Platonic intent. In the absence of evidence, we ought to leave open the more likely possibility that Plato crafted his compositions with a *variety* of proximate aims in mind, corresponding perhaps to the wide variety of needs and abilities present in the diverse

[20] See e.g. A. Krentz, 'Dramatic Form and Philosophical Content in Plato's Dialogues', *Philosophy and Literature*, 7 (1983), 32–47; K. Seeskin, 'Socratic Philosophy and the Dialogue Form', *Philosophy and Literature*, 8 (1984), 181–94; R. Hathaway, 'Explaining the Unity of the Platonic Dialogue', *Philosophy and Literature*, 8 (1984), 195–208; and C. Griswold, *Self-Knowledge in Plato's* Phaedrus (New Haven, 1986), 9.

[21] Cf. e.g. L. Strauss, *The City and the Man* (Chicago, 1964), 60.

audiences he foresaw for his public works: they are, perhaps, compositions crafted to achieve philosophy's aim after the manner of scientific rhetoric in the *Phaedrus* (269 E–271 A), by being simultaneously 'appropriate to each type of soul' (271 B).[22]

Be that as it may, I fail to see why a protreptic and proleptic understanding of our texts is supposed to be incompatible with the developmental view. Indeed, given my previous characterization of developmentalism (as e.g. Vlastos exemplifies it), I would think many developmentalists would claim both approaches—rightly understood—as their own. However, they will surely question some of the interpretative consequences that are alleged by Kahn to follow from this. It is not clear, for instance, that with the pre-*Meno* dialogues Plato intends proleptically to do *no more than* leave us in a state of instructive perplexity in every matter or that all his 'clues' are seriously ambiguous ('Plato and Socrates', 37). The *Euthyphro*, for example, may leave the character Euthyphro without a Socratic definition of piety, but I should still argue that it contains evidence that will allow us—in conjunction with other *Sōkratikoi logoi*—to arrive at a probabilistic interpretation of Socrates' methodology and his non-definitional understanding of piety.[23] Indeed, it might also be part of 'the meaning' of the aporetic form that it invites us to undertake the philosophical reflection required to elicit such concealed views. It also seems most implausible to hold that dialogues such as the *Gorgias* and *Protagoras* can *only* be understood in terms of a proleptic movement forward towards, say, the *Republic* (pp. 76, 89; 'Plato and Socrates', 37, 50). I should think *Plato*, at least, expected his contemporary audience to grasp a good deal of both prior to his composition of the *Republic*. Again, it may be that we find a comprehensible or philosophically adequate answer to the questions of the *Protagoras* only in the later *Republic*, but I do not see that if we neglect those answers we are utterly cut off from an understanding of many elements of the former. To think otherwise is to engage in a different, more traditional form of historicism (see my n. 4), as well as unjustifiable transparency in Kahn's second sense.

[22] Thus, I think that Kahn poses a false dilemma by suggesting that we must side either with misguided developmentalists by holding that Plato wrote for his own edification or with himself by holding that Plato wrote in order to produce philosophical effects on his readers (p. 82). Simply put, one can hold both views.

[23] See M. McPherran, 'Socratic Piety in the *Euthyphro*', *Journal of the History of Philosophy*, 23/3 (1985), 283–309, for an attempt at this sort of account.

When we turn from theoretical issues to Kahn's actual application of his protreptic and proleptic interpretative approach to the *Gorgias* and *Protagoras*, what seems most surprising is how very traditional his interpretation really is, in many of its results and especially in the actual methodology it exemplifies. Among other things, we find a use of historical material concerning the characters of the dialogues and the state of Athenian culture in the fourth and fifth centuries. References to other dialogues are used to illuminate and buttress the interpretative sketch of the underlying issues of each dialogue and the 'Socratic view': for example, the confrontation between worldly and psychic *aretē*, implicit in the Socratic mission as *represented* in the *Apology* and *dramatized* in the *Gorgias*, is said to be alluded to in the introductory conversation of the *Protagoras* and to form the background of the rest of the piece (pp. 74–5; 'Plato and Socrates', 38–9). Even references to the views of the historical Socrates and the *Socratic* ethical *position* (p. 92; 'Plato and Socrates', 43, 49) occur.[24] Other interpretative use is made of a chronological ordering of the dialogues (pp. 78–9) and—most interestingly (given Kahn's disavowal of 'transparency')—of claims concerning Plato's mental life, e.g. the distinctions that Plato had in mind across certain dialogues (pp. 80, 92; 'Plato and Socrates', 40), his growing interest in narrative form (pp. 80–1), his dislike of repetition and his desire to prepare his readers' minds 'for the more rigorous theory to come' ('Plato and Socrates', 41), Plato's dissatisfaction with his defence of Socratic morality in the *Gorgias* (p. 92), and his introduction of a diversionary speech because of his desire not to discuss a certain thesis and his desire 'to do more successfully [in the *Republic*] what he had failed to do in the *Gorgias*' (p. 92; 'Plato and Socrates', 42; cf. my n. 17).[25]

I have little direct criticism of Kahn's use of these interpretative elements (including his speculative hypotheses): in fact, I think they all contribute to what is for the most part an engaging and plausible theory of the relation between the *Gorgias* and *Protagoras* (and their meaning). However, it should be evident that the same sort of account—from a structural or methodological standpoint—could easily have been the product of one of our historicist effigies (even where Kahn's protreptic and proleptic approach becomes most

[24] This is an odd reference, in view of Kahn's denial that there is a distinct Socratic moral theory in the dialogues ('Did Plato?', 311).

[25] This last remark contradicts Kahn's claim in 'Did Plato?', n. 16, that the *Republic* 'is in no sense a *sequel*' to the *Gorgias*.

manifest).[26] Again, many historicists will also insist that the early dialogues should be understood proleptically; that is, as bearing the traces of Plato's having composed them with some consciousness of future projects in mind, of puzzles yet to be addressed, and of possible theories to be developed. Hence, they will allow the restrained, judicious use of material from later dialogues in the interpretation of earlier ones.

But Kahn's own understanding of prolepticism appears to be more extreme: some passages of his suggest that we interpret our texts in a properly proleptic fashion only when we suppose that there was *no substantial change* in Plato's thinking across a wide band of dialogues, say, from the *Gorgias* (an allegedly Group I dialogue) to the *Republic* or *Phaedrus* (pp. 73–80; 'Plato and Socrates', 37, 40). Kahn also tells us, for example, that we are to see certain dialogues as *preparatory lessons* in thinking through issues that are to be given a *final* accounting with a deeper, more mature theory that Plato is *not yet ready to present* ('Plato and Socrates', 37, 41, 50; 'Did Plato?', 310, 312; 'Plato's *Charmides*', 541–2). But, in Kahn's hands, there is a curious ambiguity to this lack of readiness. On the one hand, for a really strong proleptic interpretation to provide the sort of results indicated by Kahn—a position I shall call *hard prolepticism*—we must suppose that Plato *already had* his deeper theories ready to hand, strategically informing the composition of his seductive, early-dialogue puzzles prior to their yet-to-be-written resolutions: that is, that he was *able*, but 'unready since unwilling', to reveal his deeper accounts, as opposed to being 'unready since unable' (see e.g. 'Plato and Socrates', 40). But even recognizing the necessarily hypothetical nature of interpretative presumptions, this seems quite implausible; and clearly the fact that some view in dialogue x can be interpreted as a development upon a similar view in some earlier dialogue y is no evidence at all that Plato already had x's view in mind while composing y.[27]

[26] Note also how Kahn's allegedly proleptic interpretation of the *Protagoras*'s 'Episode 3' (338 E–349 A) ('Plato and Socrates', 43–6)—where we are supposed to 'bear in mind the overall project of the *Protagoras*, carrying forward the discussion of virtue and its teachability from the *Laches* to the *Meno*' (p. 43)—never makes discernible use of that 'future' series of dialogues to make its interpretation.

[27] See e.g. 'Plato and Socrates', 40, where Kahn argues that Plato has a distinction 'clearly in view' in the *Protagoras* on the grounds that it appears repeatedly in the later *Meno*. Kahn also holds that the test for a genuine, 'meaningfully proleptic' interpretation of a dialogue is whether that interpretation would be comprehensible to its 'original reader' ('Plato's *Charmides*', 541–2). But what this stipulation amounts to in

Kahn, on the other hand, does on occasion maintain that the deeper theory Plato has yet to reveal might well *not* have been formed in Plato's mind during the composition of an early work, and that 'it is idle to speculate' on the degree of its formation at that point ('Plato and Socrates', 50; to do so is to 'fall victim to the error of *transparency*', ibid. 37). But then *that* makes it look as if Kahn's prolepticism is not so very different from the sort assumed by historicist accounts (e.g. Guthrie's). We might well call this approach *soft prolepticism*: unlike its 'hard' cousin, this view postulates very little concerning the forward-looking attitudes of Plato. It minimally assumes, say, that the author of the *Gorgias* and *Protagoras* had from the outset of his career future literary plans and interests, and is also the author of later dialogues such as the *Republic*. On that basis—together with evidence and plausible assumptions concerning ancient human nature and authorship—this view holds that we can thus impute a certain minimal degree of diachronic, philosophical similarity and continuity between the stages of thought in the intellectual life of that one author. Thus, this approach will include something of Kahn's notion of 'thematic grouping', where a number of dialogues are interpreted as being 'bound together' by the persistent philosophical concerns they each exemplify (pp. 73–81; 'Plato and Socrates', 33). But, as I shall now argue, Kahn's own use of this notion shows a tendency towards hard—and thus, unjustifiable—prolepticism.

The concept of 'thematic unity' is Kahn's key methodological tool, and is the principal basis for his division of the early dialogues into his Groups I and II (p. 77). Thus, his revisionist project must stand or fall in so far as his interpretation and use of it are defensible. As Kahn sees it, 'correct' thematic grouping is accomplished by collecting together those Platonic dialogues that exemplify a number of the same 'persistent philosophical concerns' (p. 76). This arrangement then yields *inter alia* his Group II dialogues, which—because of their shared themes—must have been 'conceived and excecuted as a group' (p. 76). Within his Group II collection, Kahn even finds (just as a hard prolepticist might) that certain dialogues or groups of dialogues *presuppose one another* in so far as they 'belong to a series': 'Both in form

actual practice is quite mysterious, and it makes some rather controversial assumptions regarding the 'publication' of Plato's dialogues. For further criticism of this 'original reader' standard, see C. Griswold's comments on 'Plato's *Charmides*' (delivered at the 1988 Eastern Division meeting of the APA), 'Unifying Plato', *Journal of Philosophy*, 85/10 (1988), 550–1.

[their move to narrative frame and elaborate prologues] and in content [their shared themes], the dialogues of Group II form a unified series' (p. 81); they 'belong together as links in a unified chain', (p. 73). Such thematic connections are more fundamental than formal considerations (e.g. use of mime form), since 'they directly reflect Plato's philosophical interest in the composition of these dialogues' (p. 74). In fact, according to Kahn, five of his Group II dialogues (*Laches*, *Charmides*, *Euthyphro*, *Protagoras*, and *Meno*) 'cannot be adequately interpreted unless they are seen together as a thematically unified group' (p. 76; cf. 'Did Plato?', 311–12),[28] moreover, and again, 'there is overwhelming evidence on internal [i.e. formal and thematic] grounds that they were conceived *and executed* as a group', (p. 76, emphasis added).[29] This last remark makes it clear that thematic commonality is Kahn's primary justification for his chronological thesis. In confirmation of this, note that his explicit and most fundamental reason for holding the *Gorgias* to be prior in composition to the *Protagoras* is that otherwise the ordering, the 'central unity', of his Group II dialogues will be disrupted (p. 73), a unity 'defined precisely' by the three themes of teachability, the nature of virtue and its parts, and the priority of definition (pp. 75–6).

Kahn, then, takes thematic grouping to produce not only simple sets of dialogues exemplifying Plato's 'persistent philosophical concerns', but holds that the very fact of their thematic unity argues for their *chronological* grouping as well. As a methodological principle, 'thematic grouping' as Kahn employs it means just this: if set A and set B are composed of dialogues 'defined' by shared themes a_1, a_2, a_3, b_1, b_2, and b_3, respectively, and there is reason to hold that some of the members of set A are prior in composition to some of the members of B, then all or most of the members of set B were composed subsequent to the composition of the members of A. Given, then, the many thematic connections between all the early dialogues, it should not be too surprising that when Kahn searches for connections between the *Protagoras* and his other Group II dialogues, he finds connections aplenty. And given the many differences across all the early dialogues, he naturally discovers many differences between the *Gorgias* and *Protagoras* (pp. 73–80). Thus, since the *Gorgias* 'falls outside' the unity of Group II in so far as it does not discuss in any detail the common

[28] Kahn never tells us why we should accept this most implausible claim.
[29] Both remarks indicating, again, an implicit commitment to *hard* prolepticism.

themes Kahn takes to define the Group II dialogues, given his chronological principle he finds no difficulty in concluding that it must be a group I dialogue (p. 77)

Although considerations of thematic unity are surely relevant to the interpretative process, everyone—Kahn included (pp. 71–2, 90–1, 101)—will recognize that thematic connections can point in a variety of interpretative directions. But Kahn's chronological principle is too simplistic to overcome this inherent indeterminacy, and thus its results are unacceptably arbitrary. There is simply no reason for thinking that Plato must have written his dialogues in the sort of thematically linear fashion Kahn's interpretative principle assumes: writing, say, the *Charmides* followed by the *Laches*, with no possibility of his changing course and writing the thematically dissimilar *Ion* in between. Kahn gives no reason for this critical presumption, and clearly the burden is his. For although there are many philosophical authors whose literary productions are chronologically ordered in a thematic fashion, just as many (if not more) authors pursue a variety of themes in a non-linear way, revisiting favourite topics after having written on other matters for some time.[30]

Again, thematic considerations must—of necessity—play an important interpretative role, especially in making the broad chronological distinction between early, middle, and late dialogues. The thematic unity of the *Apology* and *Crito* and their mutual dissimilarities from, say, the *Parmenides* justifiably contribute to our warrant for holding them to be prior in composition to the *Parmenides* (despite the latter's earlier fictive date). But the thematic connections between *all* of Plato's dialogues—especially those traditionally labelled 'early'—are too numerous and diverse, and Plato too versatile an author, to use such connections as the primary criterion for making chronological distinctions within any given set of early dialogues.

Especially telling of the sorts of problems Kahn's uncritical reliance upon thematic unity is prone to is his assignment of the *Euthyphro* to

[30] And, of course, Kahn's hard prolepticist notion that Plato must have *conceived* of the Group II dialogues *as a group* (meaning that he had consciously envisaged the entire project in some detail prior to their composition) is implausible speculation. Note also that Kahn's view that the 'full meaning' of a dialogue is apprehensible only when it is understood as the member of a thematically unified set (Kahn, 76; 'Did Plato?', 311–12; 'Plato's *Charmides*', 541) makes it impossible for the 'original reader' criterion of 'Plato's *Charmides*', 541–2 (see my n. 27), to settle interpretative disputes, given that it is highly unlikely that Plato composed thematically unified sets of dialogues simultaneously; Griswold, 'Unifying Plato', 551.

the Group II dialogues. Kahn dates the *Euthyphro* as belonging to Group II on the basis of thematic factors (especially its logical method and terminology, and its treatment of the definition of virtue: p. 96; 'Plato and Socrates', 41), ignoring the fact that the *Euthyphro* fails to satisfy the formal conditions of possessing narrative form and elaborate prologue that he elsewhere relies upon for placing the *Laches*, *Charmides*, *Lysis*, and *Euthydemus* together under the Group II banner (and for his assignment of the *Protagoras* to Group II) (pp. 78–80; 'Did Plato?', 309). Again, Kahn claims that formal and thematic connections taken together are 'decisive' in making of the Group II dialogues a *unified* series (p. 81). But—to the contrary—the same 'decisive' factors of form and thematic content which Kahn uses to locate the *Gorgias* outside Group II and the *Protagoras* within it argue for the *Euthyphro*'s placement in Kahn's Group I, *not* his Group II. Kahn, for example, claims that since the *Gorgias* 'looks back so constantly on the trial and death of Socrates . . . thematically speaking, it may be described as the philosophical sequel to the *Apology* and the *Crito*' (p. 74). But if so, then given the strong formal and *thematic* connections between the *Euthyphro* and the *Apology* and *Crito* (e.g. its fictive date, its apologetic nature, the way it 'looks *forward* to the trial and death of Socrates'), it should then be seen as thematically 'linked' (Kahn's term) to the *Apology* and *Crito*, and thus classified as a Group I dialogue. Moreover, since the *Euthyphro* possesses Kahn's Group I characteristic *differentia* of simple mime form (direct dialogue) and lack of prologue (and again, lacks his Group II formal characteristics), there should be no doubts as to its membership in Group I. Kahn anticipates this last point and provides a defence of sorts, but it is quite simply *ad hoc*: as he sees it, the *Euthyphro* (also *Meno*) is a conscious *reversion* by Plato to his earlier, largely abandoned interest in simple mime form (p. 80).[31] But we are given no reason for thinking this is the case, and even if it were, no reason why we could not then make the

[31] He also argues for his chronological thesis by claiming that the *Gorgias* (507 A ff.) treats piety and justice as parallel, whereas the *Euthyphro* (12 A–D) defines the former as part of the latter (p. 98). But the text of the *Gorgias* does not show this: its treatment of piety and justice is clearly compatible with that of the *Euthyphro* (McPherran, 'Socratic Piety', 286–7). Kahn also holds that lack of a fictive date is a Group I *differentia*, and that the *Crito* is then the kind of exception that proves the rule, since its 'date is fixed not by Plato's artistic decision but by the topic itself' (p. 78). But Kahn fails to note that the same observation applies to the *Euthyphro* equally well (and to the *Apology*). Finally, given the sophisticated structure of the *Apology* (and many other Group I dialogues), I do not think Kahn can justifiably hold that Plato's interest in 'controlling the literary impact on the reader' (p. 80) is a *distinctive* feature of the Group II dialogues (pp. 80–1).

same claim on behalf of the traditional dating of the *Gorgias* (thereby dismissing Kahn's formal and thematic evidence, just as he dismisses that which connects the *Euthyphro* to the *Apology* and *Crito*). This result, I think, demonstrates the way in which an over-enthusiastic, thesis-driven use of 'thematic unity' to settle chronological issues fosters the production of eclectic chronological groupings. Similar difficulties are easily imagined.[32]

In Kahn's examination of eight standard justifications given for the chronological priority of the *Protagoras*, concern with thematic unity gives way to other, traditional interpretative strategies. His responses to the first seven of these justifications are quite telling, and warrant our reconsideration of the strength generally ascribed to the case for the priority of the *Protagoras*. But Kahn's response to the eighth is problematic, and its problems are symptomatic of the grave difficulties harboured by his larger thesis. Kahn grants that the best reason for holding the *Protagoras* to be prior is the greater maturity of the *Gorgias*'s psychological doctrine: that is, it anticipates the complex psychology of the *Republic* (cf. my n. 25) by recognizing good-independent desires and the virtue of the harmonious soul that restrains desire (503 D–507 E), whereas the *Protagoras* denies *akrasia*, and thus good-independent desires (p. 84). Kahn acknowledges that this is a severe problem for both his interpretation and broader project, in so far as he holds that all his Group II dialogues represent a Socratic intellectualism that Plato must have seen as immature relative to his own, already developed, more complex account. Kahn's response is to hold that the Socratic intellectualism present in Group II (but absent from Group I, and thus the *Gorgias*) is simply an intentional literary creation of Plato's, having some reference to the historical Socrates, 'but which cannot be explained by that reference', (p. 90). Thus, the earlier *Gorgias* tentatively, proleptically, reveals what Plato is willing to expound only *after* completing his 'Group II project'. Kahn's primary justification for this view is his claim that the intellectualist identification of virtue with knowledge must be a non-Socratic creation of Plato's, since Socrates 'never claimed to be wise; but he did not deny that he was pious, brave, and just' (p. 98).[33] Kahn's thought here, apparently, is that if Socrates had held the intellectualist

[32] For example, thematic unity would—if tied to Kahn's chronological principle—argue for the implausible view that the *Phaedo* was written not long after the *Apology*.

[33] Here, presumably, Kahn is referring to the historical Socrates he finds represented in the *Apology* (see e.g. Kahn, 81).

'virtue is knowledge' thesis, then since he would claim to have acted virtuously on occasion (as the *Apology* shows), he would also—contrary to the facts—have to have claimed knowledge of the virtues, and thus wisdom, for himself.

But this, I think, is simplistic, and it ignores Kahn's own criteria of thematic unity (in so far as we take the *Apology* and *Crito* into account). First, Aristotle, as well as many of Kahn's 'non-intellectualist' Group I dialogues (especially the *Apology* and *Crito*), testifies to historical Socratic intellectualism.[34] Not only that: Aristotle's testimony can be employed to nail down the distinction between the Socrates of the early dialogues (Vlastos's 'SE') and the Socrates of the middle dialogues ('SM') in such a way as to make eminently plausible the historicist's working hypothesis—*contra* Kahn—that the ideas of the historical Socrates survive in Plato's early dialogue recreations of his philosophical activity; and thus, that the historical Socrates is preserved in the guise of the intellectualist Socrates of Kahn's Group II.[35] As mentioned earlier, however, Kahn is unimpressed with Aristotle's witness. As he sees it, Aristotle was himself the first historicist, the first to be 'taken in' by the 'optical illusion' created by Plato's masterful fictions (pp. 98, 100–1; 'Plato and Socrates', 34; 'Did Plato?', 310 and n. 13). Unfortunately, Kahn gives us very little reason for believing this and doubting the general reliability of Aristotle's Socratic testimonia (especially where they are paralleled by Xenophon).[36]

[34] e.g. *EE* 1216^{b}ff.; *NE* $1144^{b}17$ff.; *MM* $1182^{a}15$ff., $1183^{b}8$ff., $1198^{a}10$ff.

[35] Vlastos's 'Socrates' is a virtuoso performance of this approach. Irwin, too, relies on Aristotle to aid him in making the distinction between SE and SM: *Plato's Moral Theory* (Oxford, 1977), 198–9, 291; 'Reply', 195, 198–9.

[36] His persistent, and so primary, criticism of Aristotle's testimonia is that he had 'no taste or talent for the history of philosophy' ('Did Plato?', n. 13; cf. Kahn, 100) (also, disagreeing with the majority of scholars (cf. Vlastos, 'Socrates', n. 86; E. R. Dodds, *The Greeks and the Irrational* (Berkeley, 1951), 209), Kahn finds the alleged Pythagorean influence on Plato's development of the theory of forms 'extremely doubtful', thus impugning Aristotle's testimony to it: 'Did Plato?', n. 13). But whatever sympathy this quite general evaluation of Aristotle *qua* historian may elicit, it is off the mark in the particular case of Socrates; and although Aristotle may violate modern historical standards by explicitly summing up the ideas of his predecessors in very much his own terms, we are often in a position to make reasonable allowances for it; cf. Guthrie, *History of Ancient Greek Philosophy*, iii. 357.

In his portrayal of Aristotle as the first historicist, Kahn simply assumes that Aristotle is a naïve, *uncritical* reader of the dialogues who has (therefore) learnt everything he attributes to the historical Socrates from those dialogues. But Kahn is mistaken on both counts: (1) Aristotle is a most discerning and discriminating reader of the dialogues, testifying unambiguously to the difference between SE and SM; willing, for example, to

Next, it has been shown by several commentators that the 'virtue is knowledge' thesis need not have the implications Kahn imagines: on their account, Socrates can confidently identify act-tokens of virtue *without* having knowledge of the virtues.[37] Thus, Socrates may deny complete and infallible knowledge of virtue-concepts, such as piety, and none the less acknowledge that he is pious, brave, and so forth in small things; that is, he can *do* pious and brave things, and can know *that* such actions are pious and brave, but this is nevertheless consistent with his disclaiming the knowledge of *how* or *why* they are pious and brave (disclaiming the knowledge that constitutes the virtues).[38] Not only that, but *contra* Kahn he can also claim to do *wise* things: for example, to obey the commands of the god (*Ap.* 29 C–30 B) and thus to *be* wise, although in a limited, *human* way that in no way involves possessing the complete and infallible knowledge of virtue-concepts constituting wisdom (*Ap.* 20 DFF.). In fact, we find just such an acknowledgement of his own, merely human, wisdom at *Ap.* 21 D.

criticize only SE's moral psychology, not SM's (*NE* 1145^{b}23ff., *EE* 1216^{b}2ff.), while even explicitly praising Plato's (*MM* 1182^{a}15ff.); crediting Plato, but not Socrates (and not SE), with a doctrine of separate Forms (*Metaph.* 987^{a}29ff., 1078^{b}12ff., 1086^{a}37ff.); and (2) there are numerous items of Aristotle's testimony that could not be due to his having been the naïve victim of Plato's dramatic legerdemain, since there is nothing in the texts to suggest them (e.g. that Cratylus was Plato's first master: *Metaph.* 987^{a}31ff.). Indeed, at least a third of the testimonia in T. Deman's *Le Témoignage d'Aristote sur Socrate* (Paris, 1942) are of this sort; cf. Vlastos, 'Socrates', 102–8; Guthrie, *History of Ancient Greek Philosophy*, iii. 355–9; J. Beckman, *The Religious Dimension of Socrates' Thought* (Waterloo, 1979), 17–18; all the former following W. D. Ross, in e.g. 'The Problem of Socrates', *Classical Association Proceedings*, 30 (1933), 7–24. Next, Kahn overlooks Aristotle's own classification of the *Sōkratikoi logoi* as imitation (*mimēsis*) of a special sort, a sort to be distinguished from pure literary fiction (*Po.* 1447^{a}1ff.). In the case of a Socratic dialogue which imitates a historical personage, poetic imitation must—on Aristotle's own account (*Po.* 1454^{a}24–5)—be a reasonably faithful representation of Socrates' character and practice of philosophy (Beckman, *Religious Dimension*, 8–10). Finally, the fact that Aristotle was a critical reader who was also well-acquainted with other *Sōkratikoi logoi and* continually in contact with people who had known Socrates in their youth should clinch the case for the general reliability of Aristotle's testimonia. Rather than undermining the historical worth of Plato's early dialogues, then, Aristotle's reliance on them testifies to his confidence in them as a source of Socratic thought, where Plato 'is speaking for Socrates, recreating Socrates' search' (Vlastos, 'Socrates', 105).

[37] Compelling arguments for the view that Socrates does not endorse the radical principle of the priority of definition Kahn here attributes to him, can be found in J. Beversluis, 'Does Socrates Commit the Socratic Fallacy?', *American Philosophical Quarterly*, 24 (1987), 211–23, and J. H. Lesher, 'Socrates' Disavowal of Knowledge', *Journal of the History of Philosophy*, 25/2 (1987), 275–88. For a recent, comprehensive account of this view see Brickhouse and Smith, *Socrates on Trial*, esp. sect. 2.6.

[38] See e.g. Brickhouse and Smith, *Socrates on Trial*, sects. 2.6, 3.2, and 'The Paradox of Socratic Ignorance in Plato's *Apology*', *History of Philosophy Quarterly*, 1/2 (1984), 128.

Kahn's own positive arguments in favour of his thesis follow his strategy of thematic unity (e.g. p. 91), and thus are open to the sorts of criticisms seen above. But there are two points worth special mention. First, Kahn claims that the hedonism of the *Gorgias* is crude in comparison with that of the *Protagoras*, thus arguing for the chronological priority of the former. The traditional account makes readers wonder why Plato has given Callicles such a *comparatively* weak version of hedonism; but such awkward questions 'will not even arise if the more refined hedonism [of the *Protagoras*] had not yet been formulated' (p. 95).

My response to this is simply to point out that even on a soft proleptic reading, the relative complexity of the *Protagoras*'s hedonism is perfectly compatible with its traditional pre-*Gorgias* dating: Plato simply has good *dramatic reasons* for depicting an impulsive and unphilosophical Callicles on the one hand, and ascribing a much superior philosophical insight to Protagoras on the other (a figure towards whom Plato is generally quite deferential). For, among other things, it seems as though Plato is not interested in the *Gorgias* in the question of whether there is a defensible version of hedonism, but instead wishes to dramatize the absurd conception of the good life that results from denying that temperance is beneficial.[39]

Next, Kahn holds that his overall interpretation will make the introduction of hedonism at *Prot.* 349 A–361 C easier to understand than when approached via historicism (pp. 72–3, 93–5; 'Plato and Socrates', 46). As he sees it, the identification of the good with the pleasant is treated as a hypothetical thesis agreeable to sophists, thus setting up an *ad hominem* argument against them, and is surrounded by markers that warn us not to take it as a *satisfactory* account of virtue. Rather, it is only a simple model for the good, a protreptic and proleptic sketch that will provide a one-dimensional theory of motivation *compatible* with a purely intellectualist account of virtue, without actually being *part* of the Socratic ethical position: this model, then, sets the stage for Plato's later, deeper theory (pp. 72–3; 'Plato and Socrates', 49–50).[40]

[39] R. McKim, 'Shame and Truth in Plato's *Gorgias*', in Griswold (ed.), *Platonic Writings*, 273 n. 18. The preceding shows that even if one heeds Kahn's admonitions to pay attention to the dramatic structure of each dialogue, one can still be led to conclusions at odds with those of Kahn. And by supposing above that 'the more developed the theory, the later the dialogue', Kahn himself exemplifies a naïve form of developmentalism.

[40] Note, finally, that Kahn also argues for his relative dating by holding that the

I cannot pursue this point in all its details, nor go into the many issues it raises. But focusing only on Kahn's explanation for the introduction of hedonism, consider this quite similar alternative:

> Socrates *is* arguing from the Sophist's own premises, . . . illustrated in this dialogue by his little harangue at 334a–c on goodness as a relative concept. But Plato's motive is not . . . to attack them openly. . . . A logical outcome of the Sophists' teaching . . . was a life lived according to the hedonistic calculus. . . . Introduced as the opinion of the common man. . . . it is so presented that the Sophists agree it is their view too. But before they do that, Socrates has refined it so that 'pain' includes . . . the shame one would feel at the knowledge one was behaving as a coward. . . . The morality of Protagoras, based on conventional premises . . . differed from the Socratic in its conception of the *telos*, the ultimate end to be sought. For the contrast we may look to *Phaedo* 69a, a passage still in purely Socratic vein which puts in its proper place the 'art of measurement' as understood in the *Protagoras*. Virtue, says Socrates, is not to be bought by exchanging pleasures for pleasures and pains for pains, the greater for the less like coins. The only genuine coinage . . . is wisdom. If this sounds vague, we know from many other places in Plato what it means. The wisdom which is virtue will ensure the well-being of the *psyche*, which alone matters.

This partial account is surely feasible and is fairly innocent of *naïve* historicism; moreover, it is not very dissimilar from Kahn's in its essential elements.[41] More importantly, the methodology it

argumentative techniques of *Prot.* 351 B–354 E surpass those of the *Gorgias* in so far as only those of the former employ some measure of positive argumentation analogous to the method of hypothesis of the *Rep.* (92–3; analogous, that is, because in the *Protagoras* 'Socrates begins by formulating a proposition or thesis that will be useful for reaching a solution that can hardly be reached without it', p. 93). But—*contra* Kahn—the same sort of positive argumentation can be found in the *Gorgias*, e.g. at 474 E–479 E (cf. esp. 475 E, 479 E; and Vlastos, 'The Socratic Elenchus', *Oxford Studies in Ancient Philosophy*, I (1983), 44–58). Given that, and the many elements of Socratic moral theory that the *Gorgias* shares with the members of Group II (acknowledged elsewhere by Kahn: p. 90), Kahn is wrong to think that *nothing* connects the *Gorgias* with his Group II dialogues (p. 77). Again, it needs to be said that there is no implausibility in supposing that late in his early period Plato might have written a dialogue like the *Gorgias*, one that exhibits in a number of ways the actual argumentative techniques of his long-gone teacher (thus explaining the presence of standard Socratic *epagōgē*, cited by Kahn, 92, as evidence for its prior composition).

[41] This interpretation, in fact, seems more persuasive than Kahn's, since—unlike his—it holds that the 'harangue' at *Prot.* 334 A–C is *not* an irrelevant red herring that 'derails the argument' ('Plato and Socrates', 42) but serves as an integral part of the 'argument for hedonism' by illustrating the Protagorean relativity of 'good' (Guthrie, *History of Ancient Greek Philosophy*, iv. 232). Kahn's explanation for the diversion is that Plato is not disposed to complete the argument, since doing so will involve arguing that

exemplifies here and in other unquoted portions is manifestly the same: among other things, in both cases there are appeals to what the sophists and Socrates held, a textually justified and protreptic account of Plato's strategy, and a soft proleptic look forward to the doctrines of later dialogues. The method, in fact, could have been Kahn's, but the author of the passage is Guthrie (*History of Ancient Greek Philosophy*, iv. 232–4).[42]

As I see it, this result—together with our preceding discussion—gives some confirmation of the worth of the protreptic and soft proleptic reading of the early dialogues. But it also greatly undermines the novelty of Kahn's admonitions and the claims of his revisionary project. In particular, I take the preceding to have shown that Kahn's anti-historicist 'error theory' is itself in error.

More worrying, however, is that the preceding also suggests that it will not gain us very much new ground to make our accounts explicitly sensitive to Plato's protrepticism, prolepticism, and 'thematic unity'. Such general sensitivity, even conjoined with sound historical methods, will be unable, it seems, to settle our interpretative disagreements at the real level of detailed interpretation. Although I think we can place a good deal of confidence in the generally accepted ordering of the dialogues into early, middle, and late (with the *Gorgias* and *Protagoras* reliably placed in the first group), having secured it through the careful use of (1) literary criticism, (2) philosophical considerations, (3) stylometric and linguistic tests, and (4) external evidence and cross-referencing (in an ascending order of objective reliability), the chronological order *within* the set of early dialogues, and to some extent the later ones, is likely to remain for ever speculative. Vlastos

justice is beneficial, a thesis that Plato does not wish to discuss in the Group II dialogues ('Plato and Socrates', 42). But why should we prefer *this* explanation to one that makes the diversion integral to the immediate argument? I should think that a sound interpretative principle would be that we ought to prefer the interpretation that gives the text the strongest argument compatible with other surrounding evidence (thus, at this interpretative juncture Kahn needs to provide better evidence that Plato is saving something for later beyond merely pointing out that the subject is discussed more fully in Plato's subsequent work).

[42] Thus, given the above account, Kahn is wrong when he claims that historicists (viz. Guthrie) *must* take the hedonism of this section of the *Protagoras* as belonging to either the historical Socrates or to an earlier stage in Plato's development (Kahn, 72; 'Plato and Socrates', 46). For Kahn's agreement with Guthrie's *ad hominem* interpretation of the argument see his review of G. Ryle's *Plato's Progress* in *Journal of Philosophy* (1968), 369. For a similar, but more detailed, *ad hominem* interpretation of the *Protagoras*'s argument against *akrasia*, see D. Zeyl, 'Socrates and Hedonism: *Protagoras* 351b–358d', *Phronesis*, 25 (1980), 250–69.

gives us one ordering of the early dialogues and employs it to produce an interesting and coherent account of Socratic philosophy.[43] Kahn and others give us various other orderings, and derive different and fruitful accounts: fruitful, that is, on what will probably always be in part rather shaky criteria of what it is to be fruitful.

That such a plurality of accounts should still stand after all this time is not surprising: Plato was the foremost exponent of the dialogue form, and there has never been anything quite like them—then or now—to compare them with. Neither do we know in a strong sense the identity of their intended audiences: whether or not, for example, they are chiefly sophisticated but philosophically opaque texts and advertisements for the Academy.[44] Given that, and the opacity natural to all texts—even first-person confessionals—whose authors are unavailable for interrogation, the interpretation of the dialogues is likely to remain our perennial task.

This view, and the present interpretative situation, will prove disappointing to those hard souls happy only when they grasp the one true Grail of certitude. But it should perhaps be enough of an achievement if we produce a limited number of plausible interpretations arising from a limited number of diverse and plausible interpretative assumptions.[45] No doubt all these interpretative flowers that now bloom do so as a result of that longing for the Grail. But that longing would perhaps be more effectively channelled—and more in line with Plato's own possible maieutic hopes for his creations[46]—were it tempered and informed by greater reflection on the import of Plato's well-known dream of being an elusive swan. Simmias the Socratic, at

[43] Vlastos's most current view (e.g. in 'Elenchus and Mathematics: A Turning Point in Plato's Philosophical Development', *American Journal of Philology*, 109 (1988), n. 30; and 'Socrates', nn. 21, 79) is that the *Gorgias* is the last dialogue of the set of early 'elenctic dialogues': *Apology*, *Charmides*, *Crito*, *Euthyphro*, *Gorgias*, *Hippias Minor*, *Ion*, *Laches*, *Protagoras*, *Republic* 1 (listed in alphabetical order). The other early, but 'transitional', dialogues are *Lysis*, *Hippias Major*, *Euthydemus*, and the first third of the *Meno* (down to 80 E). The *Menexenus* is an early but non-elenctic dialogue.

[44] On the intended audience for the dialogues see e.g. M. H. Miller, *Plato's* Parmenides (Princeton, 1986), esp. pp. 15–25.

[45] And as Irwin, 'Reply', 199, notes: 'It is an illusion to think we can find the right interpretive methods and strategies in advance of considering the philosophical merits of the conclusions they yield.'

[46] On the 'maieutic' reading of the dialogues see e.g. P. Friedländer, *Plato*, trans. H. Meyerhoff (Bollingen Series 59), i. *An Introduction*, 2nd edn. (Princeton, 1969), 154–70; D. Halperin, 'Plato and Erotic Reciprocity', *Classical Antiquity*, 5/1 (1986), 60–80, esp. pp. 76–9; and K. Sayre, 'Plato's Dialogues in Light of the *Seventh Letter*', in Griswold (ed.), *Platonic Writings*, 93–109.

least, interpreted it as meaning that 'all men would endeavour to grasp Plato's meaning; none, however, would succeed, but each would interpret him according to his own views' (Olympiodorus, *In Alcibiadem*, 2. 156–62).

Let us imagine, then, that Plato was quite aware of the future interpretative malleability of his work. If that should be right, then it would perhaps have been *one* of Plato's intentions that as beginners in philosophy, and taken in by the dramatic art of the dialogues, we should seek to uncover the views of the historical Socrates, views he preserved for us—in living form— there in his texts. Clearly, some of the early dialogues *are* intended to be *inter alia* defences—and thus substantially accurate recreations—of the activities and views of his philosophical master. But, this having been done, it would also be Plato's further hope that we should begin to discover those elements in ourselves and the world that—projected on to the mirror of his texts—resist our attempts to fully grasp our long-gone swan (and his teacher). None the less, even after such discoveries, these texts will still serve—protreptically, maieutically—as invitations to join in, say, with the argument between Socrates and Callicles. They will always ask their readers to look proleptically, as even 'historicists' often do, for the unsupported assumptions and incomplete theories that need further thought on the way to the philosophical illumination Plato posits as the end of all our efforts and desires (*Seventh Letter*, 341 C–D). That, in any case, is one cage for our swan.

Colby College

'WHEN WORLDS COLLIDE'

Volume I of
David Furley's
The Greek Cosmologists[1]

ERIC LEWIS

THE collective writings of Furley contain so many passages at which one can only exclaim; "Why didn't I think of that?" This is partially due to Furley's rare ability to present the muddled clearly, the complex simply, the garbled elegantly. Moreover, the volume under review is partially intended for students, and so the above virtues are particularly manifest. Yet at the same time this book, and its still unwritten companion (which will venture into the still relatively uncharted waters of post-Aristotelian natural philosophy), offer a coherent picture of a continuous tradition of debate concerning the formation and structure of the universe. These two volumes, along with *Cosmic Problems*, a collection of Furley's more technical papers, allow one easy access to the opinions of one who has done more than perhaps anyone else to usher in the 'modern' era of scholarship concerning the atomists and ancient natural philosophy in general.

Furley views the ancient cosmological debate as one between two very loosely connected groups, those who advocate 'the Closed World', vs. those who advocate 'the Infinite Universe'. Although we now believe that our universe may or may not be spatially infinite, it was the Closed World advocates who ruled the day for millennia. Of course the most famous members of the 'Closed World club' are Plato

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I have benefited from discussions with Kathleen Cook, John Ellis, Ros Thomas, and Richard Sorabji. As always, I am especially indebted to Richard for his concern and criticism.

[1] David Furley, *The Greek Cosmologists*, i. *The Formation of the Atomic Theory and its Earliest Critics* (Cambridge University Press, 1987), viii + 220.

and Aristotle, and it is primarily through Aristotle's influence that the Closed World is *the* world till seventeenth-century thinkers start seriously to undermine the credibility of the Aristotelian world-view.

It is the Open World advocates who have received less attention. The most important members of this 'club' are the ancient atomists. Furley has already done much to illuminate our picture of atomism; here he turns his attention to the 'arguments and counter-arguments put up in favor of each side' (p. 2). He discusses three pairs of features which help characterize the differences between the Closed World and Infinite Universe advocates. These are evolution and permanence, mechanism and teleology, and atomic vs. continuous matter. The Infinite Universe advocates postulate worlds which grow and decay, they have a theory of evolution—of how one 'gets' from simple stuffs to biological organisms. The Closed World advocates, according to Furley, postulate worlds that do not evolve. 'The forms—that is to say, the natural kinds—which are realized in the world are *permanent*' (p. 4). Furley tells us that 'In the Infinite Universe . . . since each world has a beginning in time, there must be an origin of each natural kind found in the world; and since there is no room in the theory for any patterns or models of the natural kinds existing in separation form the world, each natural kind has to be seen as growing or evolving from less complex elements' (p. 4).[2] He goes on to tell us that this difference between the Closed World and Infinite Universe advocates 'has had the most profound effects. One side is called on to explain the origin of complex forms, out of simple elements; the other side is not' (p. 4). It is useful to survey the thinkers Furley is concerned with to see how neatly they fall into these two groups. It is with regard to the evolution and permanence distinction that things get a bit tricky. But first some general comments about the terms 'Closed World' and 'Infinite Universe'.

What, crudely speaking, characterizes the difference between those who advocate a 'Closed World' and those who advocate an 'Infinite Universe'? Clearly the difference does not concern the temporal nature of the universe. Furley places Plato, Aristotle, and the Stoics in the Closed World group, yet, as he tells us (p. 4), Plato has the world created (in time?), Aristotle's world has no temporal beginning or end,

[2] It is unclear *why* there is no room in Infinite Universe theories for something akin to, say, Platonic Forms. In fact, on some interpretations of the *Timaeus*, the Forms do have a sort of pre-existence—could not Plato have also made his cosmos spatially infinite?

while for the Stoics (on the reasonable presumption that they postulate not circular time but infinite repetitions in linear time) the world is repeatedly created and destroyed. The distinction must concern, at first approximation, something about the spatial nature of the universe. Furley tells us that he will 'use the word "universe" to refer to all that there is, and "world" or "cosmos" to refer to an organized system of natural parts, usually centred, literally or metaphorically, on the inhabited earth. In the Infinite Universe there may be many worlds, in this sense; but the Closed World, according to its adherents, is identical with the universe' (p. 2). This distinction is neutral as to whether the 'Closed World' is thought to be simply unique, i.e. the world is equated with all that there is (which may be spatially infinite), or whether Closed World advocates also think of the world (= the universe) as spatially finite. I take it that Furley intends this narrower meaning.[3] How can we 'sort' thinkers according to this distinction?

Furley considers Anaximander to be an Infinite World advocate (Anaximander thought of our world as embedded in a surrounding mass of an indeterminate substance that had always existed and stretched without limit or variation in all directions: p. 29). Parmenides is considered to be 'the first to demolish the idea of the infinite universe' (p. 56), although his follower Melissus returns to the Infinite World fold. (Again, problems with his twofold distinction arise. Melissus considers 'what is' to be spatially infinite, yet surely he would not allow even the *possibility* of a plurality of worlds.) Anaxagoras is said to belong to the 'one world camp', yet that which surrounds this one world is said to be boundless, and so he must be a member, I take it, of the 'Infinite World' group. Furley argues that Empedocles is also a member of this group; that for Empedocles *Sphairos* should not be identified with the cosmos (pp. 89–90). In fact, the only Presocratic member of the 'Closed World club' is its founder, Parmenides. Yet Furley rightfully comments that it is difficult to extract from Parmenides any positive cosmology. It seems that if two camps exist which can be glossed as 'Infinite Universe' and the 'Closed World', the distinction must lie with Furley's other pairs of oppositions (evolution–permanence, mechanism–teleology, atomic–continuous matter).

[3] On this reading the Stoics hold an uneasy middle ground, since they conceive of the void that surrounds the unique cosmos as infinite, yet not truly existing, but subsisting.

Let us now see how much useful sorting the evolution–permanence pair can achieve. Here a further distinction is helpful. We can distinguish what I shall call 'cosmic development' from (for want of a better term) 'entity development'. The former is a theory which has it that the world (or worlds) grow and decay, it is a theory which incorporates a dynamic cosmology. The latter may have it that the universe itself was never created, and shall not be destroyed, yet offers a theory of how the entities of the world are related to each other in a way that has some of them out of others, i.e. a theory which *does* offer an explanation of complex forms out of simple elements. Of course many theorists offer both; as Furley notes, the theory of cosmic 'evolution' includes not just the formation of the cosmos itself, but the great world-masses, and the origin of complex organic forms (p. 3). Yet these two enterprises, a descriptive cosmology and a theory of the development of complex organic forms, need not go hand in hand. Perhaps Aristotle is the best example of a theorist who does not have a dynamic cosmology (he is a member of the 'Closed World club'), yet does have a theory of entity development.

Surely Aristotle goes to great lengths to explain the origin of complex forms out of simple elements. The progression from *On Generation and Corruption* to the fourth book of the *Meteorology*, through the assorted biological works, can be viewed as an extended attempt at offering precisely such an explanation of entity development. The central role the theory of mixture plays in Aristotle's natural philosophy is partially due to his need to have a theory of how complex forms are 'out of' (*ek*) the elements. On the other hand, the atomists (the archetypical Infinite Universe club members) offer but a brief explanation of how complexity comes about—the amalgamation of atoms. The Stoics also hold a middle ground. Furley considers them to be 'Closed Worlders', yet they have a sophisticated theory of the creation of the elements, and the relationship of the elements to *pneuma* and the origin of complex organic forms. Not only that, they seem to be cosmic developmentalists as well, due to their theory of *ekpurōsis*. The Neoplatonists, who also postulate a succession of worlds, are both cosmic and entity developmentalists. In fact, almost all members of the Infinite Universe club offer sophisticated theories of either how complex forms emerge out of simple elements, or how complex forms can be reduced somehow to simple elements, even if they are not cosmic developmentalists. In a sense, it is the atomists, the main (perhaps only!) members of the Infinite Universe club, who

have the least sophisticated theory of the relationship of complex forms to simple elements.

This distinction, and the other two, that the Closed World advocates hold to some notion of teleology and conceive of matter as continuous, while the Infinite Universe advocates are mechanists, and view matter as atomic, do not dominate the whole structure of this book. In fact, as I have mentioned, apart from the atomists, it is difficult to place any other thinkers discussed in this volume firmly into the Infinite World group.[4]

Furley presents an admirably clear exposition of Parmenides (ch. 4.3–4). His accounts of Anaxagoras (ch. 6), and Empedocles (ch. 7), which contain much that is new and exciting, demonstrate quite clearly the varied ways in which these theorists were motivated by Eleatic concerns. Yet it is with Zeno, Melissus, and the atomists that one reaches the 'essential' chapters of the book, and so I shall turn to a more careful analysis of them.

1. The atomists and the void

In ch. 9.2 Furley turns his attention to the atomists' conception of, and reasons for postulating, the void. He briefly discusses the development of the idea of 'true void', as opposed to a space empty of everything but air. As Furley notes in disagreement, David Sedley has argued that the early atomists, unlike Epicurus, conceived of the void as an occupant of space, a sort of negative substance or fluid, as opposed to space itself unoccupied.[5] Now we conceive of 'a true void' as unoccupied space. Furley's claim that 'the concept of true void was understood before the atomists of Abdera built it into their system' (p. 119) is neutral, I take it, as to which notion of the void was introduced. Sedley characterizes the two concepts of void as 'unoccupied space', and 'that which is a space occupant'. It is this latter view which he thinks the Presocratic atomists employ. Yet this way of distinguishing the two views, illuminating as it clearly is, can mislead. Both views employ the notion of space, and the second view seems to be actually *more* sophisticated than the first, since it entails

[4] Mechanistic tendencies can also be found in many 'Closed Worlders', as in Plato, Aristotle, and the Stoics.

[5] See D. Sedley 'Two Conceptions of Vacuum', *Phronesis*, 27 (1982), 175–93.

giving 'an account of the difference between the space and its occupant' (Furley, p. 112 n. 10). Yet this way of wording the difference between these two conceptions of the void is from our modern perspective, where we have a clearly defined notion of space. Looking back, we can gloss the distinction this way. Sedley (I take it) does not mean to imply that the Presocratic atomists had such a sophisticated conception of space and its occupants. His view is something like the following. The Presocratic atomists did not muse over the nature of space and the like, but simply thought you can have 'atom here, or void here'. The universe is 'tiled', or filled in by two things, void and atom—no question as to *what* is being filled in was asked. From our perspective we can characterize this view as one which fills space either with atoms or this 'thing' called void, yet this is not how the atomists thought. These unfortunate uses of the term 'space' may account partially for Furley's rejection of Sedley's distinction (which seems worth further examination).[6]

Furley concludes his discussion of the nature of the void with another thoughtful, and compelling, suggestion (which he attributes to M. Stokes). Wondering why the atomists chose to incorporate 'what is not' (*mēden*—a name the atomists give to the void) into their system, with all the Eleatic baggage this entails, instead of simply talking of 'the void' (as does Epicurus), Furley comments:

> It may have been considered that to posit two kinds of being, the full, and the empty, would be to reintroduce the perceptible opposites that had been ruled out by Melissus' argument ... Another possible reason can be found in an argument of Zeno (Fr. 3). Zeno argued that any two items of being need a third item to separate them, and that third needs another item to separate it from the first, and so on ad infinitum. But if the third item, that separates the first two, is not-being, then no regress is generated by the proposition that any two items of being need something to separate them.

Such a suggestion seems eminently sound.

Furley moves on to what he sees as the second argument the atomist offers for upholding the existence of the void, that it is needed in order to allow motion to take place. He again sees precedents in an argument from Melissus (fr. 7. 7–8): 'And nothing is empty. For what is empty is nothing. Now, what is nothing could not be. Nor does it

[6] On p. 191 Furley, after arguing that Aristotle did not have a clear conception of space, uses this as evidence that Democritus and Leucippus should not be accredited with an understanding of this notion. In a footnote, he states that 'This indicates a doubt I feel about the argument of Sedley' (p. 191 n. 14).

move. For it cannot yield anywhere: it is full. If it were empty, it would yield into the empty; there being nothing empty, it has no place to yield.' Such arguments are best employed as attempts to rule out contraction and expansion, not locomotion in general (as Descartes was to recognize). Yet this need not concern us now. Furley also thinks Epicurus used this argument of Melissus'. He views Epicurus' reaction as follows:

(1) Motion does exist (empirical claim).
(2) No motion without void (agreement with Melissus).
(3) Then there is void.

Yet Furley thinks that Leucippus and Democritus do not offer such an argument. He bases this on a reading of Arist. *GC* 1. 8, 325ª23–32, which he translates as follows:

> But Leucippus thought he had arguments which would assert what is consistent with sense perception and not do away with coming-into-being and perishing and the plurality of existents. He agrees with sensible appearances to this extent, but he concedes to those who maintain the One [sc. the Eleatics] that there would be no motion without void, and says that the void is what is not, and that no part of what is is what is not—for what is in the strict sense is wholly and fully a being. But such a being, he says, is not one; there is an infinite number of them, and they are invisible because of the smallness of their mass. They move in the void (for there is void), and when they come together they cause coming-to-be, and when they separate they cause perishing.

Concerning this passage, Furley states that 'what lies behind this seems to be not the Epicurean argument "no motion without void; but we observe motion; therefore there is void," but rather a defensive argument against the Eleatics of this form: "no motion without void; but there is void; therefore there *can* be motion," [my emphasis].' This, Furley tells us, corrects what he wrote in 'Aristotle and the Atomists on Motion in a Void', where he did attribute the Epicurean argument to Democritus and Leucippus.[7] I wonder whether such a correction is called for. The crucial line 325ª24–5, which reads *ouk anairēsousin oute genesin oute phthoran oute kinēsin kai to plēthos tōn ontōn*, strongly suggests that Leucippus meant to account for the fact that there appears to be motion (*oute kinēsin* has, incidentally, been omitted

[7] In P. Machamer and R. J. Turnbull (eds.), *Motion and Time, Space and Matter* (Ohio, 1976), 83–100; also reprinted in *Cosmic Problems*.

from Furley's translation). Presumably, Aristotle is here distinguishing the triad coming-to-be, perishing, and motion, to make it clear that he has a specific, not generic, use of *kinēsis* here in mind—most likely to mean locomotion. This is supported by the use of *kinēsis* at 325ª27, i.e. no *kinēsis* without void. In other words, Leucippus does wish to be consistent with sense-perception, and so be able to account for motion. The question is whether the fact that there is motion is a premiss of his argument or a conclusion. Furley's view is supported by 325ª31, where we find *kenon gar einai*, inserted as a parenthetical clause. Furley therefore views the structure of the atomists' argument as follows:

(1) No motion without void.
(2) There is void.
(3) There can be motion.

not

(1) No motion without void.
(2) There is motion.
(3) There is void.

There are two additional factors which seem to support the second argument, *contra* Furley. First, by the time Aristotle writes *kenon gar einai* he is in the midst of a description of the atoms, having left behind any *argument* he might have presented concerning the possibility of motion. Aristotle's text is highly compressed, and I would be loath to attribute this clause to the atomists as a premiss in any deduction based on this passage alone. Secondly, note the modal operator in the conclusion 'motion is possible', the conclusion we are given on Furley's interpretation. We are (then) left with no argument for the existence of the void, or at least no argument based on the fact that there seems to be motion. Yet Furley himself recognizes that the atomists wish 'to reject the Eleatics' conclusion and allow that there is real motion of real things' (p. 120), not just that there *can* be motion. I therefore conclude that if we need cull an argument from this passage of Aristotle, it should be that of early Furley, not late Furley.

After a useful discussion of why the atomists want to accept even some of the Eleatics' conclusions, Furley turns to an account of the atoms themselves. This is a topic where he has contributed to our understanding more than perhaps any other. Furley claims, as is common, that 'Democritus relied on the notion that only what is

cracked can be broken: if a thing is divisible, it must be because there is void in it. So the atomists postulated the existence of bodies, too small to be perceived, in which there is no void at all, and they were able to claim that the perfect solidity of these bodies made them indivisible.' This is puzzling. It seems that the existence of void 'in' a body can, at best, yield one of two results:

(1) *not in any way* affect the divisibility of a body;
(2) have it that the body is *already* divided.

The first result follows if one imagines a body, say sphere-shaped, with a 'bubble' of void in the middle (much like the medieval examples of what would result if God destroyed everything below the heavenly spheres). The only other possibility is that the body has continuous (i.e. not bubble-like) regions of void which *already* divide it. If not, what one has is a complex of bubbles or channels which neither yield the division nor the divisibility of the body. Note how the only 'type' of divisibility at issue here is physical divisibility. The only way one could concoct an argument for the divisibility of bodies due to internal void is by moving to conditional claims: a compound body *can* be divided because void can *come to be* between its parts. An atom cannot be divisible because void cannot *come to be* between its parts. Is this because the atom is solid (i.e. contains no void), as Furley claims? Well, in a sense yes, but in a sense no. This could only be taken as a description of what solidity *means*; it does not *explain* the physical indivisibility of the atoms.

To put it succinctly, actual presence of void in a body is not sufficient for the body's divisibility (e.g. bubbles), nor necessary (i.e. a complex of atoms which do not enclose any void areas). It seems that the atomist must argue as follows: any body that is divisible is divisible because void can come to be dispersed through this body. Atoms cannot have such void through them because they are *apatheis*. Need this be equivalent to claiming that the atoms are solid (*sterea*)? If *apatheis* is given its literal meaning of 'not liable to change' (here only internal change?), one can explain why the atoms cannot come to have void within them, for they are changeless. One is now left only wondering why the atomists did not argue directly from changeless to indivisibility, without the intermediate steps of invoking the void.[8]

[8] The evidence from Simplicius concerning this issue is confusing. *In De caelo* 242. 18–19 (67 A 14 DK) seems to suggest that the atomists did argue that the divisibility of bodies (composite only?) is due to the void in them. Yet *In Phys.* 925. 10 (67 A 13 DK) suggests that they argued from *apathes* to *atoma*.

2. Atoms and Zeno

Furley, while discussing the atomists' response to Zeno's dichotomy and Achilles puzzles, states the following (pp. 126–7):

> By postulating the existence of partless atoms the Atomists have denied the premiss of the infinite divisibility: they have denied the possibility of an infinite sequence of steps to be taken before reaching a goal. The man crossing the stadium, and Achilles pursuing the tortoise, will be separated from their goal by smaller and smaller stretches of territory until they are separated only by one partless atom: the next move closes the gap, and they have reached their goal.

This passage raises a very interesting issue; precisely how does atomism offer a response to Zeno's 'motion' paradoxes? One might think that Presocratic atomism, that is, a theory which postulates indivisible (physical or conceptual) atoms and void (whether space-occupant or unoccupied space), seems to offer no response to Zeno's paradoxes of motion in so far as these paradoxes seem to require atomistic space (or void), if something about theory of atomism is meant to offer a response.[9] Remember, atomism is a theory that postulates void in order to either allow for or explain the possibility of motion. Atoms move not through other atoms, but through void. This point is often lost when one considers, say, Achilles running down a road trying to catch a tortoise. Achilles is not an atom, but a complex of atoms, as is the road, and the air surrounding Achilles. Few texts exist telling us whether the atomist thought that within the cosmos there is any or much void (although atomist accounts of rarefaction and condensation seem to suggest that such processes involve the entering and leaving of void, not air). Yet whether or not Achilles moves through a lot of void, or all air, Zeno's dilemma goes unsolved. Need the air-atoms which Achilles pushes move forward in atomic units? Does Achilles himself move in atomic units? If so, why? What

[9] A full-fledged discussion of this issue would take us too far afield. One needs to discuss the complex issue of the precise nature of the indivisibility of atoms. Richard Sorabji has convincingly argued that the traditional physical/conceptual distinction with regard to atomic indivisibility is too crude an instrument to do the required work. Two things can be conceptual (as opposed to physical), the impossibility of division or the division itself. To what degree the atomists were aware of these subtleties affects what inferences they would have been likely to draw from their postulation of indivisible atoms. I think that the issue here need not centre on the nature of indivisibility as much as on the nature of motion.

about the theory of atomism entails this? Zeno's dilemmas, to the degree that they are directed against the possibility of motion, seem to require atomistic *space* in order to be solved, if the atomists are to offer a response via materials internal to their theory. There may be a point where Achilles is but one atom away from the tortoise in the sense that the road they both travel on contains but one (road)—atom between the foot of Achilles and the tail of the tortoise—yet nothing about postulating atoms of matter entails that Achilles must move atomistically, that his very next movement makes this gap go to zero.[10]

Of course a solution presents itself. If these atoms are truly partless (as Furley thinks they are), as opposed to merely physically indivisible, motion *must* be atomic. Truly partless atoms are indivisible in all the senses of indivisible that may be countenanced, not merely physically indivisible. If Achilles were to move continuously over the atomic 'bricks' in the road, then one can conceptually divide these 'bricks', say when the tip of Achilles' toe is over the middle of a given atomic 'brick'. This Aristotle realized, when in arguments of enormous influence for the subsequent development of atomism he claimed that those who uphold material atomism should also be space-and-time atomists (see *Phys.* 6. 1, 231^{b}18–19). Yet this is an argument of Aristotle's, and not of the Presocratic atomists. I know of no textual evidence that seriously suggests that Democritus and/or Leucippus took this step.

The situation is as follows:

(1) The atomists postulated partless atoms, and realized that this entails atomic space, or 'jerky' motion.
(2) The atomists postulated partless atoms, failed to make the above inference, yet thought something about the atoms' partlessness solved the paradox.
(3) The atomists thought that owing simply to the fact that there is a last atom in any material interval (whether partless or not), they had solved the motion paradoxes.
(4) The atomists did not directly address the motion paradoxes.

[10] Again, it has been suggested to me by Richard Sorabji that the atomists need not say anything more than that there is only a finite number of 'bits' of road, and that such a response would satisfy the rhetorical standards employed in arguing against opponents, and that they themselves might not have drawn any further consequences with regard to how their atomism relates to these paradoxes. If the atomists had all mused over the motion of a single atom through the void, the impotency of atomism as such with regard to solving these motion paradoxes would have become clear.

Furley's language suggests option (1): 'until they are separated only by one partless atom: *the next move closes the gap*' (my emphasis). The italicized clause entails at least 'jerky' atomic motion, if not atomic space. It seems difficult to argue that the atomists but tacitly recognized the need for atomic space or jerky motion, since these lay right on the surface of their response to Zeno, if they responded as in (1) above. For this reason (2) does not seem to be a particularly attractive option either. Option (3) is effective as an *ad hominem*, yet musing over precisely how atoms in motion respond to this paradox seems to draw one towards option (1) so quickly that I am tempted to accept option (4). Even if the atoms are partless, the atomists did not investigate how this might offer a response to Zeno's motion paradoxes, since we have no evidence that they postulated atomic space or atomic motion.

A possible confusion arises in Furley's discussion of interpretations of Zeno's paradox of the large and the small (*apud* Simpl. *In Phys.* 141. 2–8). Furley agrees with J. Barnes's account of Zeno's 'mistake'. Furley comments as follows (pp. 109–10):

> Alternatively—and I now think this is more likely—the division may proceed by dividing not one of the two parts at each step, but both of them. The objection would then be that any bulky object must contain infinitely numerous parts, each having some finite size, and thus its size must be infinite. The fallacy in this has been well set out by Jonathan Barnes, in a way that convinces me: to summarize roughly, Zeno has not yet proved that his object consists of an infinite set of finite parts, but rather that it may be regarded as consisting of an infinite series of finite sets of finite parts. But the fallacious conclusion is a plausible one that proved acceptable to many later philosophers.

There is an oversight here. The 'problem' with Zeno does not involve sets of parts all having *some* positive size, but sets of parts all having *the same* positive size (as J. Barnes is well aware). This makes all the difference. Consider the set $(\frac{1}{2}, \frac{1}{4}, \frac{1}{8} \ldots)$, i.e. a set whose members correspond to the lengths of successive intervals taken in a dichotomy-like way. Every member of this set has some finite size. Unless one is a strict finitist, an interval does consist of such an infinite set of finite parts. What cannot be demonstrated is that a finite interval can be precisely exhausted by an infinite set all of whose members have *the same* measure (I move freely, perhaps cavalierly, between sets whose members are measures, and those that are not).

Barnes's point is the following (whether or not it is a historically accurate interpretation of Zeno's reasoning): Zeno *has* demonstrated that, given the set $\{\{1\}, \{\frac{1}{2}, \frac{1}{2}\}, \{\frac{1}{4}, \frac{1}{4}, \frac{1}{4}, \frac{1}{4}\}. . .\}$, each member of this set has equal measure, yet each of these members of the greater set contains but a finite number of members itself. The above paragraph should be rewritten as follows:

> The objection would be that any bulky object must contain infinite numerous parts each having [the same] finite measure. . . . his object consists of an infinite set of finite parts [all of the same measure] . . . as consisting of an infinite series of finite set of finite parts [all of the same measure]. . . .

3. The atomists and the cone

In the next section (9.4), entitled 'Atoms and Mathematics', Furley asks the important question, Was it 'possible for Democritus to give a coherent account of these differences [those of size and shape of the atoms], while continuing to respect the Eleatic arguments?' (pp. 128–9). The problem is the classic one: how can one reconcile the indivisibility of the atoms with the need for them to come in different sizes and shapes? Furley (rightly) distinguishes Epicurus from Democritus and Leucippus 'by the modification introduced by Epicurus, who dissociated the physically indivisible from the theoretically indivisible, and asserted that the atoms contain indivisible parts' (p. 128). Surely a 'theoretically' has dropped out before the final 'indivisible'. The Epicurean minimal parts are themselves partless, they are conceptually indivisible.

After an interesting, if highly speculative, suggestion concerning how the Atomists may have tried to define atomic shapes based on the outlines of atoms and not based on the internal arrangement of their parts, Furley moves on to that thorny question of whether Democritus was a geometrical atomist.[11] Furley sees three options, which reduce to the following:

(1) Euclidean geometry holds for continuous divisible magnitudes, yet not of atoms: perhaps only of void, or of nothing in nature.

[11] Furley's suggestion relies on Democritus fr. 15a, where Simplicius, following and elaborating on Aristotle, comments that 'if what is curved is an angle, and the sphere is curved all over the whole of itself, then it is reasonably called a whole angle'.

(2) Atoms are physically and conceptually indivisible, yet Euclidean geometry somehow holds.
(3) Dismiss conventional (Euclidean) geometry, construct an atomistic geometry.

Furley rejects (2) since it both seems to be an unpromising move to make and 'it is almost decisive that Aristotle believed Democritian atomism to be in conflict with mathematics' (p. 129). It is Furley's rejection of (3) in favour of (1) that merits discussion.

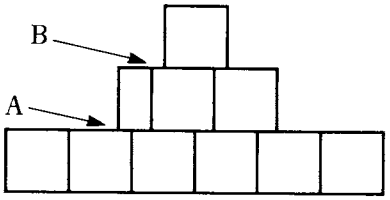
Furley reminds us that there is little evidence that Democritus proposed any alternative geometry, which goes against acceptance of (3). In connection with this, Furley discusses the much-loved example called Democritus' Cone. This example from Plutarch (*CN* 1079 E) runs as follows (after Sorabji):

> Moreover, look at the way in which Chrysippus met Democritus, when the latter raised the following lively puzzle in physics. If a cone should be cut in a plane parallel to the base, what ought we to think about the surfaces of the segments produced? Are they equal or unequal? For if they are unequal, they will make the cone irregular, and it will take on many step-like incisions and roughnesses. But if the surfaces are equal, the segments will be equal, and the cone will evidently have acquired the properties of a cylinder, being composed of equal, not of unequal, circles, which is as absurd as it could be.

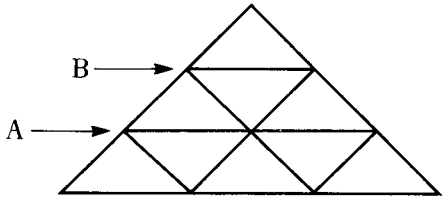
Furley comments as follows (p. 130):

> But if this is an argument for an atomistic geometry, then the puzzle was merely a temporary one for Democritus: the surfaces are in fact unequal, the cone is stepped, and the problem is solved. Plutarch, however, says only that Democritus raised the problem: he does not attribute any solution of it to him. And there is no solid evidence elsewhere for an atomistic Democritian geometry.
>
> The cone argument seems, in fact, to support the first option rather than the third. Democritus raised the cone as a problem. But there is no problem if the cone is made of atoms, as we have seen. On the other hand there is no problem for the conventional geometrician, either: for him, the surfaces of the two segments are plainly equal, since they coincide. The problem arises only if one supposes geometry is applicable to a physical solid.

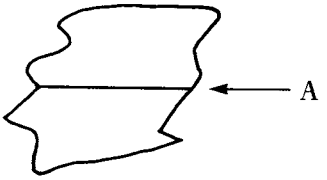
Furley seems to be imagining a cone composed out of atoms as follows (in two dimensions):



Yet if this is how a given cone-shaped macroscopic object is composed out of atoms, this is surely a contingent fact, what about the following?



Here cuts made at A and B do not yield surfaces differing in size, the triangle is not notched. Surely such a configuration of atoms is possible. Indeed, the problem can be made far more general. Consider any two atoms of any shape at all, which share a common surface.



Divide this complex of atoms at A, and the same argument can follow. Surely the atomist 'solution' to this dilemma, the manner in which atomism offers a response, is not by claiming that all complexes of atoms are stepped (this would be to allow a conceptual problem to dictate the way the world can be configured in a most unsatisfactory manner), but by claiming that such divisions cannot be made *throughout* a complex of atoms. My suggestion is as follows. Democritus would agree that cuts made at A and B yield two surfaces that are of the same size. He would also agree that if this is true wherever you cut

this purported cone, it would in fact by a cylinder. Yet, so he would claim, you cannot divide it everywhere, only at A and B, and so the cone is only locally like a cylinder (i.e. at the junctions A and B), and not globally like a cylinder (i.e. not everywhere cylinder-like).

Only if Democritus realized that the problem does not arise at the level of purely mathematical objects, since then only one surface is created (Furley's 'since they coincide'), can we accept Furley's option (1). Yet there seems little evidence to support this. I am tempted to think that Democritus thought that this problem arises whatever sort of cone one is dealing with, and so he thought that traditional geometry was inconsistent, since there can be no cones (they are all in fact cylinders). This supports Furley's option (3), or a variant of it. Perhaps all Democritus thought was that conventional geometry is inconsistent, without attempting to offer an atomist alternative.[12]

4. The infinite universe

In ch. 10, entitled 'The Cosmos of the Atomists', Furley presents a characteristically lucid account of the atomists' theory concerning the spatial infinitude of the universe (10.1), the origins of the world (10.2), and the atomic theory of motion (10.3). I shall concentrate on sect. 10.1, since the debates between the Closed World advocates and the Open Universe advocates play such a major role in the whole book. Furley's discussion of the reasons why the atomists postulated a universe infinite in extent, containing an infinite number both of atoms and of worlds, rests on an (unfortunately) dense passage from Aristotle (*Phys.* 3. 4, $203^{b}15$–30). Here Aristotle presents 'Five reasons that have led people to believe in the infinite' (p. 136). As is often the case, Aristotle leaves these views unattributed, and so attributing any of them 'to Democritus must be judged in each case on its merits' (pp. 136–7). The fifth argument Furley presents as follows:

[E1] The exterior regions [sc. the region outside the boundaries of the cosmos] being infinite, it seems that body, also, is infinite, and worlds, too; for why here in the void rather than there? So if in one place, there should be a

[12] In fact, even given a physical cone, the surfaces coincide unless the parts are separated, and so the paradox does not arise (the separated parts are neither a cone nor a cylinder). With mathematical cones both the atomists and the traditional geometers can claim that the two surfaces coincide.

mass in every place. [E2] Moreover, if the void and places are infinite, body must be too; for in eternal things there is no difference between can be and is. (Phys. III 4, 203^b25–30)

Furley takes both E1 and E2 to represent atomist arguments (even though he sees the introduction of the principle of plenitude in [E2] as an Aristotelian intrusion). I disagree.

Better sense can be made of these arguments, I think, if neither E1 nor E2 reports atomist views. Furley sees an important point here, commenting as follows (p. 138):

> If we leave on one side for the moment the brief mention of the notion of infinite worlds, the most interesting point here concerns the style of argument. E1 depends on some notion of a principle of sufficient reason. The argument is that since we see a certain concentration of matter in the portion of the universe that houses our world, and since the universe as a whole—that is to say, the void—is everywhere invariant in quality, so that it is impossible to imagine anything that singles out our region as special, it follows that we must imagine every region of the universe to be similar to ours in housing about the same amount of matter. There is no sufficient reason for ours to be different.

Furley rightly notes that this instance of the principle of sufficient reason can be seen as a spatialization of Parmenides' temporal argument found in fr. 8. 9–10, 'What necessity could have forced it to grow, starting from nothing, later rather than sooner?' This interpretation has the atomists altering an Eleatic argument to suit their own needs, an interesting proposal. Furley is surely right to investigate this under-studied passage of Aristotle's. Yet is this allusion to Parmenides in and of itself evidence that we have here an atomist argument? I think not.

If this is an atomist argument, it is a poor one. The original Parmenidean use of the principle rules out coming to be and passing away altogether, there is no time at which there is coming to be or passing away. The analogous spatial use of the principle should have it that the density of matter in the void is invariant, i.e. that there is matter everywhere in the void, that the void is totally full of matter, or at least that the ratio of matter to void in arbitrarily given regions is similar. If this invariance is meant to apply only to the density of matter in some regions [of the void], then one cannot help but ask, 'Why here in the void and not there?' What the atomists require is a fairly weak claim, that there are other worlds, other atomic vortices. Nothing about how these atoms are spread out in the universe (*to pan*)

need be said. Yet a passage which Furley cites, Hippolytus, *Refutations* 1. 13. 2 = 68 A 40 DK, seems to undermine his view concerning the atomists on the 'invariance of matter'. Reporting the atomists concerning the plurality of worlds, Hippolytus tells us 'in one region there are more, in another fewer'. Such a view is difficult to reconcile with Furley's interpretation, since it rules out both a totally full universe (strict use of principle of sufficient reason), which we know the atomists did not advocate anyway, and a universe in which matter is basically evenly distributed (weak use of principle).

If this is not an argument of the atomists, then whose may it be? I suggest that it would make a very good argument for Melissus, and indeed would go so far as to suggest that this may be a (new) testimonium for Melissus. One piece of evidence that this is the view of an atomist is that it talks of the void (*to kenon*). Yet we have ample evidence that Melissus used this term, equating it with *to mē on*. We also know something else about Melissus that is most intriguing. He disagreed with Parmenides as to whether the universe is infinite or finite in extent. Rejecting Parmenides' 'bounded like the mass of a well-rounded sphere', Melissus argued that 'it' is spatially limitless (see frr. 2, 3, 4). I propose that Melissus used the Parmenidean argument to demonstrate that Parmenides himself should have claimed that the universe is limitless. The argument runs as follows:

(1) Assume 'it' is limited (as in Parmenides).
(2) Therefore it is surrounded and limited by void (= *to mē on*).
(3) Why body here rather than there? (spatialization of Parm. fr. 8. 9–10.)
(4) Therefore 'it' is limitless.

We have additional evidence from Aristotle that Melissus would agree with (2) (if we can accept that the following passage reports a view of Melissus): 'From these arguments then—transgressing what the senses say and ignoring them on the grounds that one must follow the argument—they conclude that the universe is one and motionless; and some add that it is unlimited, for its limit would limit it against the void' (Arist. *GC* 325^{a}13–14 = 30 A 8 DK). This interpretation allows the principle of plenitude to be used in its strict formulation, by yielding the true invariance of matter—having infinite extent, and being uninterrupted. This gives Melissus a most interesting, and plausible, way of grounding his most fundamental disagreement with

his mentor Parmenides. If this is not a testimonium for Melissus, I think we can agree that it is the way he should have argued![13]

5. Plato and Aristotle on the atomists

In Volume II Furley will discuss the positive aspects of atomism that are incorporated into Plato's cosmology. In this volume he is concerned with those aspects of atomism that Plato rejected, and why. He sees Plato's rejection of atomism as part of a general anti-materialist programme. This programme he presents in a most clear way, dividing it into headings entitled 'Matter as a secondary cause', 'Matter and predication', and 'The impiety of materialism' (ch. 12.1–3). In 'Matter as a secondary cause' Furley uses a very interesting passage from the *Timaeus* (46 C–E) to present Plato's point that more than matter alone is needed to explain the order of the cosmos. Here Plato, after giving his account of sight, reiterates the point he frequently makes that it takes intelligence to produce what is good and desirable. Furley comments that 'it is hard to believe that the material elements alone will explain the facts of sight. We know well enough how one piece of matter can transmit a color to another, as in a process of dyeing; but that one *sees* a colour—that is a very different thing . . . something of a quite different order is involved' (p. 170).

In 'Matter and predication', Furley makes the suggestion that pondering over difficulties in Anaxagorean physics 'helped steer Plato towards the theory of Forms' (p. 172). In a nutshell, Furley's suggestion is that Plato wanted to retain as much as he could of Anaxagoras' view of the relationship of a predicate to its subject. Anaxagoras has it that a predicate names a (material?) ingredient of its subject. What Plato wanted to retain was the sense in which a subject 'has a share of', or 'participates in', its predicate. Yet, 'since it did not seem to him [Plato] to make sense to think of the predicated items as masses of material substance, as Anaxagoras did, he postulated immaterial beings instead, called by the general name "Form" (*eidos*) or "Idea" (*idea*)' (p. 172). This is characteristic of the many exciting suggestions peppered throughout this book.

[13] A problem this view must face is the status of Melissus fr. 9, *apud* Simpl. *In Phys.* 109. 34 and 87. 6, where Melissus seems to claim that 'being' is incorporeal. If this does express a true view of Melissus', it becomes much harder to countenance his postulation of body being spatially infinite.

Furley has much to say about both Aristotle's response to the atomists, and his critique of materialism in general. Furley emphasizes that Aristotle thinks that 'Atomism is fundamentally misdirected. The *nature* of a thing is not to be found in the material elements that compose it, but rather in the form that determines its composition' (p. 179). This objection Furley relates closely to Aristotle's claim that the atomists ignore final causation, since 'In Aristotle's own philosophy of nature, it is the form that works as the final cause in the structure of a natural object' (p. 181). Furley views this failure to consider form in its various guises as 'the focal point of the differences between the cosmologies we are studying' (p. 181). I wonder whether this comparison may in the end prove more fruitful than those introduced at the beginning of the book under the rubric of Closed World and Infinite Universe.

After discussing Aristotle's complaint that the atomists cannot account for why earth falls and fire rises, and that the shape of atoms alone cannot account for all perceptible qualities, Furley turns to Aristotle's critique of the atoms themselves, and the void. Here he views Aristotle's argument based on the division of the motion of a body (*Phys.* 6. 10) as damning to a conception of atoms as being truly partless, while finding the argument of *Phys.* 6. 1, to the effect that no continuous magnitude can be composed of indivisibles, ineffective. He usefully surveys Aristotle's arguments to show that void is not a prerequisite of motion, concluding that these arguments 'show how far Aristotle was from a notion of space' (p. 191). This is an important point to remember. We are also given a taste of treats to come in Volume II—being told that it is Philoponus who finally offers a solution to those problems based on the velocity of a body through the void (*Phys.* 4. 8).[14] Furley concludes with a discussion of Aristotle's many arguments against a flat earth, and in favour of centrifocal motion. Here he masterfully shows how an Aristotelian physics based on a spherical earth at the centre of the universe along with lines of fall all directed towards this centre (and so not parallel as with the atomists) can both account for observed phenomena more easily than the atomistic alternative, and need invoke fewer *ad hoc* assumptions than its atomistic rival. With a final quote from *De caelo* ($297^{b}32$–$298^{a}17$), where Aristotle suggests that the earth is both round and not

[14] For those who cannot wait till vol. ii to learn about Philoponus on motion, see R. Sorabji, *Matter, Space and Motion*, esp. sect. 3.

too large due to the differing night sky in different regions (and due to an interesting observation concerning elephants!), we are told that 'this passage is said to have inspired Columbus to set sail west from the Pillars of Hercules' (p. 200), a most inspiring thought!

Perhaps the single most impressive aspect of this work is the way in which it gives one a true sense of the development of ideas in natural philosophy. Referring to the early chapters of his book, Furley tells us that 'if anything had emerged ... it is that the tradition [of philosophical thought] grew from one generation to another through criticism of the theory and substitution of another thought to be better than the first' (p. 166). It is the ease and style by which Furley achieves this that is particularly impressive.

Although I have disagreed with some of Furley's conclusions, this is to a great extent due to the state of our evidence concerning the opinions of the Presocratics. The fragments as we have them simply do not support anything like an 'obviously correct interpretation'—a pot-pourri of plausible guesses is often the best we can hope for. What this book has done for me is what I am sure it will do for many others, force one in the most pleasant way to re-examine one's views concerning the development of early natural philosophy. One can only wait in anticipation for the second volume, which will cover material of much less familiarity. Few books which make good bed-time reading are also books which upon waking one still has reason to ponder about. This book is one of them.

McGill University, Montreal

PLATO AND NOMINALISM

Critical notice of Terry Penner,
The Ascent from Nominalism[1]

DAVID BOSTOCK

TERRY PENNER's book is designed as the first of two volumes, the second to be entitled *Plato and the Philosophers of Language*. Its structure is complex. In the centre are two dialogues between Plato and Frege, first 'The Nominalist' (81 pages) and then 'Aristotle's Dilemma' (39 pages). The first dialogue introduces Plato's argument for the existence of Forms at *Phaedo* 74 B–C, and aims to clear away some preliminary difficulties that it confronts (sects. 1–5). It then turns to the task of arguing that all those who interpret Plato as committed to the literal self-predication of Forms are mistaken (sects. 6–11). The second dialogue returns to the argument of *Phaedo* 74 B–C and introduces what appears to be the main problem for it, viz. that it attempts to argue from the existence of mental states to the existence of the objects of those states. Orthodox ('Fregean') objections to this are stated, and the dialogue then attempts to raise some doubts about these objections (including doubts on the propriety of invoking 'logically parallel' arguments, and of taking logic to be 'a neutral science'). But fuller treatment of inferences involving psychological contexts is then postponed to the second volume.

These two dialogues are preceded by an Introduction of 56 pages, anticipating and sometimes amplifying several of the themes to come. (In fact Penner suggests in his preface (p. xvii) that 'most readers will probably find it best to begin right away with the dialogues, and return to the introduction later or as needed'.) They are followed by a series

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[1] Terry Penner, *The Ascent from Nominalism* (D. Reidel: Dordrecht, 1987), xxviii + 452; £52.50.

of eight Clarifications, together occupying 136 pages, which are mostly on points of Platonic exegesis affecting the claim that Plato is not committed to literal self-predication. The most substantial of these are Clarification III, on Plato's view of the world of becoming (25 pages), and Clarification VI, on the Third Man Argument (48 pages). Finally, there are 105 pages of notes to the foregoing (in smaller print), a number of which are long and introduce new lines of thought not found in the text. It may be doubted whether Penner has found the best way of organizing his material, but certainly there is a wealth of material, and a great deal of it is both interesting and controversial.

There are two main themes to the book, and I shall confine my comment to these. One is a philosophical concern with the validity of arguments against nominalism. Penner tells us that there are two such arguments to be found in Plato's middle dialogues, namely 'the argument from incorrigible mental states' (which is that at *Phaedo* 74 B–C), and 'the argument from the sciences'. Both arguments, as he understands them, take as a premiss that we have mental states which are 'about' abstract objects, and infer from this to the existence of the abstract objects they are about. But whereas the first would lead us to posit something very like *meanings* as our abstract objects, entirely transparent to us, the second leads us rather to *real natures*, of which we may have only a very inadequate conception. Penner wishes to claim that both arguments are valid, though only the second is a good one, since the first has a false premiss: there are no such incorrigible mental states as it supposes, as Plato himself later demonstrated in the *Theaetetus*. Nevertheless, the present volume concerns itself almost entirely with the first argument, with only perfunctory remarks upon the second, and in each case the discussion is clearly not completed in the present volume. My comments on this theme must therefore include some speculation.

The other main theme is exegetical. Penner's strategy is to determine how Plato conceived of his Forms by examining the arguments that he gives for them. In these arguments, he claims, Plato's only concern is to defeat the nominalist, and nothing more, and once we realize this many otherwise puzzling features of his thought will fall into place as making perfectly good sense. For he is not guilty of the various errors and extravagances that modern interpreters charge him with, and Penner pours much scorn on the patronizing attitude of these 'diagnosticians', as he calls them. (His chief target here is Vlastos. I found his tone distasteful in these passages.) In particular,

Penner spends much time defending the view that Plato is not committed to the 'preposterous' doctrine that Forms are literally self-predicating. Since his case on this presumably is completed in the present volume, I begin with some comment on this theme.

1. Self-predication

For Penner, the main reason why Plato cannot have believed in the self-predication of Forms is just that the doctrine is incredible: no sensible person *could* suppose that the Form of largeness is literally a large thing. But then it has to be explained why Plato certainly seems, to many interpreters, to have endorsed this view, and Penner's explanation is this. Plato often insists that the many sensible things that are *F* also are (or appear to be) not-*F*, and he evidently takes this as a reason for positing a Form of *F*-ness, distinct from the sensible *F* things. Penner's opponents suppose that the Form is posited to be something that is *F* without also being (or appearing) not-*F*. But Penner supposes that the point is merely this: since sensible *F* things also are (or appear to be) not-*F*, one cannot suppose that *F*-ness itself is *no more than* the sensible *F* things; it must be something *different from* all its sensible instances. This, however, is not at all the same as to say that it is 'more *F*' than they are: when sensible things are said to be 'deficient in point of *F*-ness', what is meant is simply that they are *not identical* with *F*-ness, and for that reason they are not a good guide to what *F*-ness itself is.

In sects. 7–9 of 'The Nominalist' Penner makes out a case for saying that this interpretation can be maintained for *Phaedo* 74, *Republic* 476–9, and *Parmenides* 129, and his case is perfectly plausible so far as it goes.[2] In sects. 10–11 of the same dialogue he offers an interpretation of the *Symposium* according to which it is irrelevant to the argument of that dialogue that the Form of beauty is said to be itself beautiful. (Penner does not deny that the Form of beauty is said to be a beautiful thing, but claims this to be a special case, as it is a special case that the Form of being is, and the Form of oneness is one. His main point,

[2] Penner pays no attention (either here or in Clarification I) to the rather elusive hint in the *Phaedo* passage that equal sticks remind us of the equal itself *by resembling it* (74 A 2–7; contrast 74 C 11–D 12, 76 A 1–4). He equally gives only a very brief note to a perfectly clear statement in the *Republic* passage that the particulars resemble the Form (476 C 4–7). I recur to this shortly.

however, is that Diotima's doctrine is that love is love of *the Form* of beauty, *not* because it is a supremely beautiful thing, but because it is what beauty itself is.) Then in Clarifications I–IV some further passages, mainly from the *Phaedo* and the *Republic*, are considered, and shown not to conflict with the interpretation offered.[3] Finally, in Clarification VI Penner comes to give an account of the Third Man Argument in the *Parmenides*, and maintains (to one's amazement) that literal self-predication has no role whatever to play in that argument. I shall take up this account in detail, but before I do so I should like to mention two evident lacunae in Penner's discussion of the general issue.

First, there is no consideration of the *Phaedo*'s doctrine of what can properly be counted as a cause, where it seems to me that there is abundant evidence that Forms, *qua* causes, are required to have themselves the predicates they cause other things to have.[4] The only comment on this that I could discern was a note (p. 394 n. 4) remarking that the claim that the Cold Itself does not admit of the Hot Itself does not imply that the Cold Itself is cold. By parity of reasoning, one presumes, the claim that snow will not admit the hot should not be taken as implying that snow is necessarily cold, and the claim that the soul will not admit death should not be taken as implying that the soul is necessarily alive. But even Penner does not wish to deny *these* implications (p. 201). It might, however, be replied that this doctrine of how the Forms are causes is confined to the *Phaedo*, and perhaps a temporary aberration.

Second, and much more seriously, Penner offers no discussion of the frequent claim that sensible particulars *resemble* the Forms they are called after, and that they are *copies*, *images*, or *imitations* of these forms. Again, the only comment that I noticed was in a note (p. 377 n. 45) claiming that 'Nothing that is said (at *Rep.* 476 C 4–7) requires that the *respect* in which beautiful sights and sounds resemble beauty

[3] I should mention here the striking discussion in Clarification III of the notion of being 'between being and not being' at *Rep.* 479. Penner objects to Vlastos's suggestion that this is a matter of being both *F* and not-*F*, and claims that it is instead to be constantly changing, which is not merely a matter of a thing changing from being *F* to being not-*F*, but of its lacking any persistent identity 'of its own'. (This account is mainly drawn from the *Timaeus*, but Penner also supposes—as Cornford does—that the *Theaetetus* too endorses flux for the perceptible world.) The discussion, however, appears to overlook the fact that whereas on Vlastos's suggestion Plato's conclusion follows from his premisses, on Penner's suggestion it evidently does not.

[4] I have argued this in my *Plato's* Phaedo (Oxford, 1986), and will not repeat the arguments here. (See chs. 7 and 9.)

itself should be that [both are beautiful].' But if this is not the respect of resemblance between Forms and particulars, then what is? In view of what Penner says later, when discussing the Third Man, I suspect that his answer might be this: the respect in which sensible *F* things resemble the Form *F*-ness is just that the same *word*, i.e. '*F*' or '*F*-ness', is used of both. But surely this gets things backwards. Plato's view is that particulars are called after Forms *because* they resemble them, not vice versa. More generally, given Penner's view of what a Platonic Form is, all this talk of resembling and copying is totally misleading. But then evidently he owes us an account of why Plato himself should nevertheless find it an appropriate terminology. (And he also owes us an account of why, in the *Parmenides*, Plato in effect repeated his famous regress argument in a form that is explicitly designed to focus on this notion of resemblance.) But no such account is forthcoming from *The Ascent from Nominalism.*

Let us come, then, to the Third Man Argument of the *Parmenides* (henceforth TMA). Penner's discussion of this is of great interest, but at times elusive. His general position is that the argument is a valid refutation of one reason for positing forms, namely the One-over-Many assumption. He himself agrees with Aristotle's objection to this assumption (in the lost *On Ideas*) that it would prove too much, e.g. the existence of Forms corresponding to negations (pp. 247–9, 290–1). This is partly because of his determined realism about any abstract objects there might be: he sees no reason to suppose that there must be in the world 'real natures' corresponding to any predicate 'constructed' by us from some finite stock of basic predicates. But it is also because he sees this response as forced upon the Platonist by Russell's paradox. In any event, he claims, as just mentioned, that the TMA is itself a decisive refutation of the line of thought that leads to the One-over-Many assumption. On his account, this line of thought is introduced by Parmenides in order to be refuted, and it is not—he rather suggests—a genuinely Platonic line of thought at all. (But I read a little between his lines here; there is, for example, no mention of the claim at *Republic* 10 (596 A) that there is a Form for every common name.)

Penner urges us to read the argument in what he calls an 'epistemological' way, so that its premisses do yield an infinite regress but do not yield an outright contradiction (except, of course, in so far as they contradict the assumption that there is only one Form of *F*-ness). The main idea of this 'epistemological' reading is that at each step in the

argument one quantifies only over the objects considered so far, and the leading premiss is something like this: at any stage of the enquiry, for all the objects discovered by that stage to be large, there must be a further object—not identical with any of them—by virtue of which they are all large. Moreover, this further object is itself large. We obtain an 'ontological' reading of the argument by using essentially the same premiss, but with its universal quantifier ranging at once over all the objects that might at any stage be discovered to be large. That is, in Penner's formulation:

$$\exists y \forall x (Fx \rightarrow x \in y \,\&\, x \neq y \,\&\, Fy)$$

(with 'Fx' for 'x is large', and '$x \in y$' for 'x is large by virtue of y'). Given $\exists x Fx$ as an auxiliary premiss, a straightforward contradiction is then forthcoming.[5]

Penner's attitude to this 'ontological' version of the premiss I do not find easy to understand. He wishes us to agree that it is not the premiss that Plato himself had in mind, apparently because its quantifiers range over all objects at once, and he claims that there is something very wrong with such quantifiers. His main reason for *this* claim seems to be that the use of such quantifiers leads at once to Russell's paradox, and indeed that Russell's paradox is 'virtually parallel' to this 'ontological' version of the TMA. Now this last is very clearly a mistake. The argument to Russell's paradox shows that if we adopt an unrestricted abstraction axiom such as

$$\exists y \forall x (Fx \leftrightarrow x \in y)$$

then a contradiction follows. This axiom may at first sight look rather similar to the 'ontological' premiss for the TMA, but its consequences are quite different. From Russell's paradox one may reasonably draw the moral that there are at least *some* predicates—most famously, the predicate '. . . is not a member of itself'—to which no abstract object corresponds. But if we reason in the same way from the TMA, the moral that we draw is that *no* predicates have corresponding objects. (That is, Russell's contradiction arises only by taking certain special

[5] This formulation is a slightly unnatural version of Penner's informal discussion, which leads one rather to expect:

$$\exists x Fx \rightarrow \exists y (\forall x (Fx \rightarrow x \in y \,\&\, x \neq y) \,\&\, Fy)$$

(Plato's own version might plausibly be said to require the antecedent $\exists x \exists y (Fx \,\&\, Fy \,\&\, x \neq y)$.) Clearly these details are of no importance.

substitutions for '*F*', whereas the TMA's contradiction would arise for every (non-empty) predicate whatever.)

There is, then, no close parallel between Russell's paradox and the TMA, and it is not of course true that Russell's paradox arises as soon as we introduce quantifiers ranging over all objects at once. It arises only when an unrestricted abstraction axiom is added in addition.[6] Penner offers a further objection to the use of such quantifiers, claiming (correctly enough) that modern logicians require a 'determinately specified domain' for any well-defined use of the quantifiers. So he must presumably be supposing that 'all objects' is not a determinate specification of a domain. Now this last point certainly has been argued,[7] but such arguments as I have met are hardly convincing, and anyway come from logicians of a constructivist rather than a Platonist tendency. But Penner is defending Platonism, and tells us that his own preferred way of resolving Russell's paradox is not to retreat to any theory of types but simply to deny the unrestricted abstraction axiom from which it flows. Given this approach, it is difficult to see what might be wrong with a quantification over all objects. (Notice, for example, how contemporary logicians and mathematicians will quantify over all sets without any qualms.)

From Penner's standpoint, then, there is no good reason to cast doubt upon the quantifiers employed in the 'ontological' version of the premiss to the TMA, and we do best to ignore the very confused passages in which he tries to maintain that Vlastos's analysis (from which this 'ontological' version flows) somehow refutes itself. His real motivation for objecting to this analysis is made perfectly clear: he thinks that Plato's reputation will suffer if he demonstrates that the 'ontological' premiss is false by showing that it leads to a vicious regress rather than by showing that it harbours a contradiction. I can only say that this motivation seems to me foolish, for either way of demonstrating the falsehood of the premiss is perfectly satisfactory. But let us now come back to the evaluation of the argument, as Penner sees it. (And it will make no difference, hereafter, whether we prefer the 'epistemological' or the 'ontological' reading.)

As I have said, Penner takes this argument to be a valid demonstration

[6] Penner evidently thinks (pp. 286–7) that such an unrestricted abstraction axiom is presupposed by the metatheorem that first-order logic is both sound and complete. But he does not explain why (and his brief note on the topic, p. 417 n. 25, is not intelligible).

[7] e.g. by M. Dummett, *Frege: Philosophy of Language* (London, 1973), ch. 15.

of the falsehood of the One-over-Many principle. Taken by itself, one might think of this principle as asserting just

$$\exists y \forall x (Fx \rightarrow x \in y).$$

But Penner claims that the thought behind the principle *requires* one to add, as well, both the Non-Identity assumption '& $x \neq y$' and the Self-Predication assumption '& Fy'. His reasoning on the first count is this. The One-over-Many principle claims that some fact needs explanation, namely our ability to recognize various things as all being large, and it suggests that in order to provide this explanation a new and explanatory entity must be posited, namely the Form of largeness. For it is by *looking to* this Form that we are able to classify other things as large.[8] If the form is to play this explanatory role, Penner urges, then it must indeed be a *new* entity, so the Non-Identity assumption is automatically justified.

As for the Self-Predication assumption, Penner's argument continues thus. We have posited a Form of largeness, so that (our acquaintance with) it will allow us to explain how we recognize ordinary large things. But just as that recognitional ability needed explanation (as we assumed), so we now have a new recognitional ability that needs explanation, namely our ability to recognize the Form of largeness for what it is (and not, say, the Form of smallness). But any such explanation can only appeal once more to 'what we know by virtue of our ability to use the words "large" and "small"' (p. 296). Thus there must be a predicate common to both the large things and the Form of largeness, distinguishing both from all other things, e.g. 'as being markable off from other objects at least in part because of our ability to use the word "large"' (p. 298). This, Penner concludes, automatically justifies the Self-Predication assumption, and so legitimizes Plato's refutation, but without bringing in anything so preposterous as literal self-predication.

Clearly this will not do at all. The consideration Penner adduces is by no means adequate as a substitute for the Self-Predication assump-

[8] Parmenides says: 'whenever it seems to you that there are a number of large things, it perhaps seems to you when you look at them that there is some one Form, the same over all of them; and this is why you think that the large is one . . . But what of the large itself and the other large things when similarly you look at all of these by means of the mind?' (132 A, trans. Penner). This certainly introduces the idea that we 'look at' the Form, but it does not very clearly say that we *need* to look at the Form in order to recognize the ordinary large things as such. One might, therefore, part company with Penner at this point.

tion, and it merely leads to a regress which a Platonist might perfectly well accept as benign. We begin with a predicate F and posit an object a which is supposed to explain our ability to apply that predicate. Thus

$$\forall x(Fx \rightarrow x \varepsilon\ a\ \&\ x \neq a).$$

Then there is a predicate which is true of all F things, of a, and of nothing else. Naturally. Let us take it simply to be '$Fx \vee x = a$'. To explain our ability to apply *this* predicate, we posit a further object b, and we have

$$\forall x(Fx \vee x = a \rightarrow x \varepsilon\ b\ \&\ x \neq b)$$

Then there is a predicate which is true of all F things, of a, and of b, and of nothing else. And so on. But at each stage we have a *new* predicate, and for it we posit a new Form, and in no way do we conflict with the initial assumption that there is no more than one Form for any one predicate.

One may no doubt sympathize with the thought that is actually in Penner's mind, which is this. Having posited a Form of largeness to explain our ability to recognize large things, we then apparently need a further explanation of our ability to recognize *that Form itself*, but none is forthcoming (and he aptly refers to Wittgenstein's remarks on positing mental images to explain recognitional abilities). Now this *is* an objection to the One-over-Many argument, at least if that argument is viewed in the way that Penner here views it. (I have observed, in the previous footnote, that the text is not entirely favourable to this view.) But in any case, the objection that Penner really has in mind is very clearly *not* Plato's objection. And Plato's objection evidently requires, in addition to the One-over-Many assumption, the assumption of literal self-predication that Penner is so scornful of. One will not obtain the contradiction that Plato derives without it, and it cannot be—as Penner suggests—'finessed'.

I add by way of coda that since the Self-Predication assumption certainly does need to be added to the One-over-Many assumption, if Plato's conclusion is to be derived, it is entirely plausible to suppose that Plato himself saw the argument as a refutation of self-predication. (And of course he would have no motive for refuting self-predication if it were not an assumption that he used to make himself.) But I have argued for that supposition elsewhere,[9] and will not repeat my arguments here.

[*See p. 262 for n. 9*]

2. Nominalism

Penner's primary characterization of nominalism is this: 'a nominalist holds that the only things that exist are concrete spatio-temporal objects such as people, sticks, stones and the like' (p. 22), though he may also allow the existence of 'acts of cutting' (p. ix) and 'perhaps of events (such as sounds)' (p. 336). But Penner also connects nominalism very closely with a proposal about the explanation of *language*. Without stepping outside his narrow ontology, the nominalist attempts 'to explain what we are talking about when we use general words like "beauty", "equality", "the shuttle" or "cut"' (p. ix). In particular, he has a programme for dealing with abstract nouns like 'equality' which is to show that, despite initial appearances, 'they do not name any one thing. They are merely roundabout ways of referring to such concrete spatio-temporal objects as sticks, stones and people' (p. 22). And it is because of this concern with the explanation of language that the nominalist is led to propound 'nominalistic reducing identities'. He believes that all there is to equality is just equal sticks, stones, and so forth, and so he expresses this as an identity claim: 'equality just *is* equal sticks, stones and so forth' (p. 60). Plato's strategy, Penner explains, is to refute these 'reducing identities', thereby establishing that nominalism is false, and hence that equality is some one thing, over and above all the many equal things.

At first sight, the evidence in favour of this view is good. Not counting the One-over-Many assumption (which we have discussed above), I would agree with Penner that there are three main passages in the middle dialogues where Plato is attempting to argue for the existence of the Forms, namely *Phaedo* 74 B ff., *Rep.* 476–9, and *Tim.* 51 D–52 C.[10] In each case he prefaces his argument with a statement of his opponents' position. At *Phaedo* 74 B the opponents are those who think that the equal itself is not other than equal sticks, stones, and other such things. At *Rep.* 476 A–C they are those who do not accept that the beautiful itself is one, who think that the beautiful itself does not exist, and who confuse the beautiful itself with the many beautiful

[9] 'Plato on Understanding Language', in S. Everson (ed.), *Greek Philosophy of Language: An Introduction* (Cambridge UP, forthcoming).

[10] I guess that Penner does not count the *Timaeus* as a middle dialogue, and for that reason it does not figure in his main text, which is restricted to the existence arguments of the middle dialogues. But it gets a mention at p. 336 n. 27.

things.[11] At *Tim.* 51 C they are those who say that only sensible things exist, and that the Form, alleged to exist in addition, is 'nothing but a word'.[12] (It may be noted that here for the first time Penner's nominalist invokes those *nomina* after which he is named.) At first sight, it is not unreasonable to describe these opponents as nominalists, in something like Penner's sense of the word, and I shall go along with this assumption for the time being, in order to discuss Penner's evaluation of Plato's arguments against them. But in the end I shall suggest that this characterization is misleading.

Now Penner claims that there are two anti-nominalist arguments to be found in the middle dialogues—the 'argument from the sciences' and the 'argument from incorrigible mental states'—and that both argue from the existence of mental states to the existence of the objects of those states. The first point to make, then, is that even on Penner's own account there are two further arguments to be found within *Rep.* 476–9, which do not appear to invoke mental states at all. One is this: for several values of *F* (e.g. 'beautiful', 'just', 'large', 'heavy', etc.) *every* sensible thing that is *F* is also not-*F*, and vice versa.[13] Hence, if nominalism were true, *F*-ness and not-*F*-ness would be identical, which is absurd. Another is this: for all (?) values of *F*, the sensible things that are *F* vary from one time to another. Hence, if nominalism were true, *F*-ness itself would vary from one time to another, which is absurd. Penner admits that both these arguments are present in the *Republic* passage (pp. 105–6, 112–13), but he pays them no serious attention as refutations of nominalism. This, one might guess, is because he thinks that in the first case the premiss would be difficult to defend, and in the second case the conclusion is not clearly absurd. Now I have some sympathy with the view that these arguments—and particularly the first of them—cannot seriously be defended, and so it is reasonable to ignore them if one's concern is with *good* arguments against nominalism. But I would like to add that it is quite unreasonable to ignore them—and particularly the first of them—when engaged in the exegesis of Plato's thought. For one wants to know *why* Plato

[11] Penner takes this to mean that they *claim that* the beautiful itself is just the many beautiful things, despite also claiming that the beautiful itself does not exist. This is a possible reading, and one can see how a nominalist might be led to make both claims. But obviously there is room for doubt.

[12] οὐδὲν ἄρ' ἦν πλὴν λόγος (trans. Penner). Since it is very unusual to find λόγος meaning 'word'—almost always a λόγος is at least a *phrase*—perhaps it might be better to translate 'nothing but words'.

[13] I write 'not-*F*' for brevity. It would perhaps be better to write 'the opposite of *F*'.

came to believe the paradoxical proposition that every sensible *F* is also not-*F*, and what significance it had for him. (Many of the differences between Penner and myself stem from this point.) But let us return to the anti-nominalist arguments that Penner does discuss.

The argument from the sciences (which Penner finds in the *Cratylus* and the *Timaeus*) receives very little discussion in this volume. It appears to be regarded as an argument roughly of this form: 'Scientists investigate the real nature of *x*; therefore there is such a thing as the real nature of *x*.' It is explicitly noted that this argument is not to beg the question, by taking the premiss to imply that the sciences yield *knowledge* of *x* (for, says Penner, knowledge of *x* is only possible if *x* does exist). This being so, it would certainly seem that some further premisses are required, if the argument is to be a good one (for example, that the scientists in question meet with some kind of *success* in their investigations). But although this suggestion is raised (p. 178, with n. 30), it appears to be rejected, and we are urged to accept that 'sciences are by their very nature sciences *of* something' (p. 177). At this point the discussion of the present volume is broken off, and we are left to speculate on what the next will bring. Will it, for example, allow us to *reject* an argument such as this: 'Astrologers are scientists who investigate (the real nature of) the influence that the planets have on the lives of men born at certain times; therefore the planets do exert such an influence'?

The argument from incorrigible mental states, which is the centrepiece of both this volume and the next, is the argument of *Phaedo* 74 B–C, as Penner interprets it.[14] It is:

> Equal sticks (etc.) sometimes appear to be unequal;
> But equality never appears to be inequality.
> Hence equal sticks (etc.) are not identical with equality.

As Penner first elucidates this argument, the conclusion should more strictly be stated thus: it is not true *both* that equal sticks (etc.) are identical with equality *and* that unequal sticks (etc.) are identical with inequality. For on his account the argument functions by supposing that if these identities did both hold, then by substitution of identicals the two premisses would be inconsistent. Penner then proceeds to raise the obvious objection that it is fallacious to rely on the substitu-

[14] It will be apparent from my *Plato's* Phaedo that I do not agree with this interpretation of the text. But I shall not raise that issue here.

tivity of identicals in an intensional context, and the further objection that in any case there is no proper contrast between the two premisses. For the first is presumably intended as

One sometimes thinks, *of* equal sticks, that they are unequal

and the second as

One never thinks *that* equality is inequality.

(And he goes on to observe that in fact one *can* make the proposed substitutions within the second premiss, without change of truth-value, since it is equally true that

One never thinks *that* equal sticks are unequal sticks.)

In the light of these objections, one might at least expect an attempt at a more precise formulation of the premisses of this argument, especially as Penner wishes to defend it as a *valid* argument, though in fact none is forthcoming in the present volume.

Let us speculate a little. By the usual criteria (which Penner is preparing to attack) one *can* rely on the substitutivity of identity when the context is explicitly *de re*, rather than *de dicto*. So we should turn our attention to the first premiss,

One sometimes thinks, of equal sticks, that they are unequal.

Supposing, then, that equality is identical with equal sticks, it should apparently follow that

One sometimes thinks, of equality, that it is unequal.

But this conclusion is surely false. *We* would no doubt say that it is false because no one ever does make such a category mistake; Plato possibly held (as in the interpretation that Penner so vehemently rejects) that it is false because one always thinks, of equality, that it is equal. But in either case we can make out a case for saying that the argument is now valid, and does lead to the desired conclusion. So this seems to be the most promising version of the argument, from Plato's point of view. I also note that as an interpretation it has one clear advantage over the version we began with, and one more doubtful advantage. The clear advantage is that this version only involves substitution on the basis of one identity, 'equality = equal sticks', and it is just that one identity that Plato claims to have refuted. The more

doubtful advantage is this. Plato's text inserts a puzzling reference to 'the equals themselves' between what I have been calling our two premisses, and it runs

> Equal sticks (etc.) sometimes appear to be unequal;
> But the equals themselves never appear to be unequal,
> Nor equality to be inequality.

Now it can be argued that this plural phrase ought to be interpreted as referring to exactly the same thing as the singular phrase 'the equal itself', namely in each case the meaning of the adjective 'equal'. (Penner discusses this view in a note (p. 368 n. 18) and appears not to object to it, though his own text (pp. 74–7) attempts to be more neutral.) If this is right, then Plato does state the argument in what I have called its most promising form, at least when he first states his second premiss, though not when he apparently restates it.

Since the discussion of this argument is not concluded in the present volume, we must wait to see how Penner finally wishes to formulate it, but I guess that the formulation just suggested would be at least fairly congenial to him. The point of the argument, he frequently suggests, is that we have incorrigible knowledge of 'the equal' as an object of *thought*, whereas we do not have incorrigible knowledge of any perceptible equal thing. Moreover, the objects of thought, in this context, are taken to be meanings. What he would wish to object to is my use of the *de re/de dicto* distinction, for clearly his second volume aims to overturn this distinction entirely. But, if I understand his outline correctly (pp. 311–14), his object is to show that all true thoughts are—to put it very roughly—much more *de re* than *de dicto*. If so, then the explicit *de re* formulation should not be much of a stumbling-block between us. Anyway, the two criticisms I now wish to make should, I think, continue to apply no matter what precise formulation of the argument is adopted.

In Penner's view, the argument is an attempt to refute a 'nominalist reducing identity'. The first thing to observe is that, when so construed, any appeal to incorrigibility is wholly superfluous. The argument would be just as good if its premisses were

> John is now thinking, of equal sticks, that they are unequal.
> John is not now thinking, of equality, that it is unequal.

It is quite unnecessary to add that no one *could* think, of equality, that it is unequal. I suspect that Penner wishes to bring in incorrigibility for

quite a different reason, namely as part of an attempt to show that there is such a thing as equality, for this of course is simply presupposed by the argument as formulated. Moreover, such a presupposition is entirely fair, if the object is to demonstrate the falsehood of the 'reducing identity'. As Penner explains his strategy for defeating nominalism (pp. 22–3), we begin with a presumption that there is such a thing as equality, and the nominalist *shares* this presumption, as he must do when he goes on to identify equality with equal sticks and so forth. We then show him that his identity fails, but we expect him to retain the presumption that equality exists, and so he is defeated. (That, one might suggest, is the position of the opponents at *Phaedo* 74 B.) But of course the nominalist may react by dropping the presumption, and claiming now that there is no such thing as equality. (And that, it appears, is the position of the opponents at *Rep.* 476 and at *Tim.* 51 C.) Against this position some new and different argument is needed.

The argument Penner envisages would appear to be this. We have 'experiences' or 'intuitions' concerning meanings, e.g. that what we mean by 'equal' is incompatible with what we mean by 'unequal'. Moreover, these experiences are 'incorrigible'. (Penner thinks that a nominalist might well grant the existence of such 'incorrigible experiences' (p. 26), though he himself will in the end reject them.) Because they are incorrigible, they amount to (*a priori*) *knowledge* of meanings. But knowledge requires the existence of its object. Hence there are meanings. (Plato, of course, would invoke recollection for this last step.) But I read a little between Penner's lines here, for he himself never clearly separates the two tasks of showing (1) that equality exists, and (2) that it is not the same as equal sticks and so forth. Let us return, then, for a final word on the latter.

Penner supposes that the argument of *Phaedo* 74 B–C is a valid refutation of a nominalist reducing identity. But this it very clearly is not. If the first premiss of the argument is to be acceptable as fairly obviously true, then it must be taken as meaning

> There are times when some man thinks, of *some* pair of sticks that are equal, that they are not equal.

It is scarcely possible to understand the suggestion that

> There are times when some man thinks, of *all* pairs of (concrete) things that are equal, that they are not equal.

And surely there is no reason to suppose it true. But the nominalist who claims that there is no more to equality than (concrete) equal things will evidently wish to include *all* such equal things, and any identity that he proposes will be between *all* these things and equality itself. The argument, therefore, does not refute *his* identity in any way. One can put this point also in the terms in which Penner glosses the argument: one may no doubt be mistaken about this or that equal thing that one perceives, but one does not *perceive* all the equal things there are; one may of course *think of* all the equal things there are, but it remains to be shown that thinking of equality is any more than this. Or one could put the point in the terms in which a modern nominalist would be likely to be thinking: the *Phaedo*'s argument may well be taken as showing that an (apparent) reference to equality is not the same as a reference to any particular pair of equal things, but it has no force whatever against the suggestion that an (apparent) reference to equality is the same as a universal quantification over all equal things.

I briefly draw one moral. Penner himself notes that at the time when Plato was writing the alternative theories of Platonism and conceptualism were not well distinguished, and so it is hardly surprising that Plato should see a refutation of nominalism as automatically a proof of Platonism, apparently omitting to notice the conceptualist alternative. (But one must, of course, add here that he *does* later consider the suggestion 'Forms are thoughts', at *Parm.* 132 B–C). But I would say similarly that, at the time, the alternative theory of nominalism, as *we* understand it, was not a well-worked out theory either: Plato has no conception of how a modern nominalist might try to maintain that an apparent reference to equality was really a 'roundabout way' of referring to equal things. So again it is hardly surprising that, if his arguments are taken to be directed against that theory, they miss their mark. Just as Penner objects to certain interpretations of Plato as anachronistic (pp. 24–5), I would say the same of his interpretation of Plato's opponents. Those whom he describes as nominalists are his own opponents, not Plato's, and the argument he spends so long discussing is no threat to them at all.

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FREE ACTION AND THE SWERVE

Review of Walter G. Englert, *Epicurus on the Swerve and Voluntary Action*[1]

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WHETHER free will is compatible with determinism has been much debated in modern ethics. It is often overlooked that this debate may be traced back to ancient Greek philosophy. There has been some question whether Aristotle and earlier philosophers confronted the issue.[2] But clearly the Epicureans, Stoics, and other Hellenistic philosophers tackled the problem and proposed answers. Epicurus believed that free will is not compatible with determinism. In order to save free will, he introduced a physical indeterminacy, the swerve, to account for it.

Epicurus' theory of free will was derided in antiquity, and it has not fared much better in modern criticism. Even the most sympathetic interpreters, such as Cyril Bailey, are apologetic about it. Still, the discovery of indeterminacy in quantum physics has cast some light of respectability on Epicurus' swerve; and continuing doubts about compatibilism, together with recent work on the relationship of physical to mental events, have stimulated a new interest in the Epicurean theory. In the past twenty-five years, diverse attempts have been made to understand the role of the swerve in Epicurean psychology. In

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1 Walker G. Englert, *Epicurus on the Swerve and Voluntary Action* (American Classical Studies, 16; Scholar's Press, Atlanta, Ga., 1987), x + 215; $21.95.

2 Pamela Huby proposed that Epicurus first discovered the problem of free will, and that Aristotle was unaware of it ('The First Discovery of the Freewill Problem', *Philosophy*, 42 (1967), 353–62). Against Huby, W. F. R. Hardie rightly pointed out that Aristotle did explore the problems posed by a restricted, psychological determinism ('Aristotle and the Freewill Problem', *Philosophy*, 43 (1968), 274–8). Richard Sorabji has argued that Aristotle considered in detail how voluntary action is related to determinism (in *Necessity, Cause, and Blame* (Ithaca, 1980), esp. pp. 243–56).

his recent detailed study of the swerve, Walter Englert surveys these interpretations and proposes a solution of his own.

Before turning to Englert's study, it is worth distinguishing two aspects of what may be called 'the Epicurean free-will problem'. First is the historical problem: what function did Epicurus assign to the swerve in connection with free will? Second is the philosophical problem: does Epicurus' solution have any philosophical merit? The main thrust of recent studies has been to answer the first question. These efforts have been spurred on in part by the philosophical difficulties attaching to each proposed solution. Obviously, a historical reconstruction must have some philosophical plausibility. But even serious philosophical difficulties may be insufficient to discredit the accuracy of a historical reconstruction. Philosophical difficulties will remain; but this is no reason to despair of discovering Epicurus' actual proposal and of deriving some instruction—if only a cautionary tale—from it.

Until twenty-five years ago, there was a consensus that Epicurus sought to save free will by positing an undetermined atomic movement, or 'swerve', at the beginning of every freely willed action. Carlo Giussani[3] and Cyril Bailey[4] formulated this view. Following Giussani, Bailey proposed that 'the automatic swerve of the individual atoms . . . is translated in the complex of the mind into a consciously spontaneous movement, in other words into a movement of volition'.[5]

In his book *Two Studies in the Greek Atomists* (published in 1967), David Furley suggested a radically new view. He argued that the swerve is a purely random motion that saves free will, according to Epicurus, not by initiating every act of free will, but by producing a discontinuity in the atomic movements that are responsible for a person's character. It is sufficient for such a swerve to occur once in a person's lifetime. As soon as a swerve has occurred in the mind, all subsequent voluntary actions are free in the sense that their source cannot be traced outside the agent. Furley proposed that Epicurus' theory was an adaptation of Aristotle's view that a voluntary action has its 'beginning', ἀρχή, in the agent. Furley took Aristotle to mean that the source of a voluntary action 'cannot be traced back beyond or outside the agent himself'.[6]

[3] Carlo Giussani, *Lucreti Cari De Rerum Natura Libri Sex*, i. *Studi lucreziani* (Turin, 1896), 125–69, esp. pp. 135–41.

[4] Cyril Bailey, *The Greek Atomists and Epicurus* (Oxford, 1928), 319–23, 433–7; and (ed.) *Titi Lucreti Cari De rerum natura libri sex*, 3 vols. (Oxford, 1947), ii. 839–41, iii. 1287.

[5] *The Greek Atomists and Epicurus*, 435.

[6] *Two Studies in the Greek Atomists* (Princeton, 1967), 232; see also pp. 191–4.

In my doctoral dissertation,[7] I agreed with Furley that Epicurus was influenced by Aristotle's theory of voluntary motion. But I understood the 'beginning' of voluntary motion differently. I suggested that Epicurus identified the beginning of a voluntary motion with the act of striving, called ὄρεξις by Aristotle, which forms the first stage of every voluntary motion. Lucretius calls this act of striving 'will' (*voluntas*). In order to make each beginning of motion, or *voluntas*, a genuine beginning, Epicurus posited a swerve at the start of every voluntary motion. I therefore supported the Giussani–Bailey view, except that I interpreted Epicurus' theory of free will as a theory of voluntary motion, applicable to animals in general, not just human beings.

In his recent book, based on a doctoral dissertation,[8] Englert also agrees that Epicurus was influenced by Aristotle's psychology of action. Like myself, he holds that the swerve occurs at the beginning of every voluntary motion. But, whereas I interpreted Epicurean will (*voluntas*) as an act of striving that is produced by a swerving motion, Englert regards *voluntas* as a power (specifically, 'desire') that uses the random occurrence of a swerve to effect its desire. Englert suggests that the use of the swerve by *voluntas* corresponds to the use of connate pneuma by Aristotelian ὄρεξις.[9]

Englert approaches the problem of free will by first examining the place of the swerve in Epicurean physics. The first knot of problems arises from the fact that the swerve is not mentioned in any of Epicurus' extant writings. There is now universal agreement that Epicurus is the author of the swerve. It is a matter of some controversy, on the other hand, at what stage of his philosophical career Epicurus conceived of it. In his first chapter ('Authorship') Englert adopts a suggestion, made by Ettore Bignone and endorsed by David Sedley, that Epicurus did not propose the swerve until after he composed the *Letter to Herodotus*.[10] This view is based on the belief that Epicurus

[7] 'Epicurus' Theory of Free Will and its Origins in Aristotle' (diss. Yale University, 1970), esp. pp. 62–9, 117–18, 151–3.

[8] 'Aristotle and Epicurus on Voluntary Action' (diss. Stanford University, 1981).

[9] See esp. pp. 123–9.

[10] *Epicurus on the Swerve*, 11, 48–9. David Sedley has suggested that the *Letter* was written close to 307/6 BC, about the time Epicurus came to Athens to found his school ('Epicurus and the Mathematicians of Cyzicus', *Cron. erc.* 6 (1976), 23–54, at pp. 45–6 n. 73). This dating is a revision of Sedley's earlier view ('Epicurus on Nature Book XXVIII', *Cron. erc.* 3 (1973), 5–83, at p. 14), that Epicurus composed the *Letter to Herodotus* about 301/0 BC, after he finished writing bk. 12 of *On Nature*. In 'The Structure of Epicurus' on Nature', *Cron. erc.* 4 (1974), 89, Sedley modified this previous suggestion by including bk. 13 among the books on which the *Letter* was based. Sedley's

would have mentioned the swerve in the *Letter* if he had already had the notion at the time.

There is, however, no compelling reason why Epicurus should have included the swerve in this summary of his physics. Previous scholars missed the swerve in the *Letter* because they thought of it as a continuous, oblique motion. If it were a continuous motion, it should have been mentioned along with the other two continuous motions mentioned by Epicurus—the straight downward fall of the atoms due to weight, and the sideways and upward motion imparted by blows.[11] But if, as I argued in my dissertation and Englert agrees, the swerve is a momentary discontinuity in the motion of the atoms, there is no need for it to be mentioned in the *Letter to Herodotus*. It is, moreover, difficult to suppose that Epicurus did not introduce the swerve at the same time as he assigned to the atoms a straight downward movement due to weight. As Lucretius points out, if the atoms did not swerve, they could never have met.[12]

In his second chapter ('The Nature of the Swerve') Englert presents the swerve as a sideways deviation by a minimal space. This view was

conjecture that the *Letter* corresponds to bks. 1–13 has no firm textual suport: there are no remains of bks. 2–10; and everything that remains of the rest of *On Nature* deals with issues that are at least mentioned in the *Letter*. Sedley's revised dating, moreover, would leave a considerable interval between the composition of bks. 1–13 and bk. 15, which was written in 300/299 (as shown by the archon year subscribed to it). Graziano Arrighetti has argued, against Sedley, that the structure of *On Nature* is much less systematic than Sedley supposes (*Epicuro: Opere*, 2nd edn. (Turin, 1973), apps. 1 and 2, esp. p. 728, and 'L'opera "Sulla natura" e le lettere di Epicuro a Erodoto e a Pitocle', *Cron. erc.* 5 (1975), 39–51). Arrighetti suggests that the *Letter to Herodotus* was composed between 295 and 290 BC (p. 45 of his article).

[11] There are two sections of the *Letter* where scholars have missed a reference to the swerve. In sect. 43 Epicurus explains briefly that the atoms move continuously by either passing through void or bouncing off one another. This explanation requires neither a reference to the swerve nor a reference to a straight downward movement; and neither type of movement is mentioned. In sects. 61–2 Epicurus explains the speed of the atoms by distinguishing between two kinds of movement, the downward movement imparted by weight and the upward or sideways movement imparted by collision. This entire discussion concerns only these two kinds of movement, for only they are continuous and have speed. Epicurus does not mention the swerve here because the swerve is an instantaneous jump to which speed cannot be assigned (see also pp. 12–13 of my dissertation, and Englert's response on p. 158 n. 2).

[12] 2. 221–4. Sedley has suggested that Epicurus could have combined the theory of a natural falling motion (without the swerve) with the Democritean view that the atoms have been colliding for all time ('Refutation of Determinism', in *Συζήτησις: Studi sull'epicureismo greco e romano offerti a Marcello Gigante* (Naples, 1983), 11–51, at p. 13); he is followed by Englert (p. 48). But once Epicurus, unlike Democritus, posited a straight downward motion of the atoms, he had to supply a reason of his own for supposing that the atoms have been colliding for all time.

first proposed by me in my dissertation.[13] Englert adds one modification and a suggestion. He rightly points out that the swerve occurs not only when an atom is falling straight downward, but also when it is propelled upward or sideways.[14] Clearly, if the swerve occurs in the mind, which consists of atoms continually colliding with each other, the swerving motion is not restricted to falling atoms. Englert also suggests that if space is a kind of grid consisting of minimal spaces, the atoms cannot move obliquely in a straight line, but must move in a step-by-step progression, by one minimal space at a time.[15] As Englert points out, this suggestion depends on the questionable assumption that minimal spaces are squares or cubes. This assumption is untenable. A minimal space forms a continuum along with other minimal spaces, but has no shape in itself. Thus, an atom can move in a straight line in any direction, by traversing in smooth succession a series of minimal spaces arranged as a continuum.

In the third chapter ('The Swerve and Epicurean Physics') Englert proposes that in *Physics*, 8. 4 Aristotle distinguishes between three kinds of motion: forced motion; the 'passive' natural motion of the four elements; and the 'active' natural motion of living creatures, that is, voluntary motion. Correspondingly, Englert suggests, Epicurus posited a third, 'active' type of natural motion, the swerve, in addition to the forced motion of the atoms and their natural downward motion.[16] Since the swerve has a role in voluntary motion, there is a rough correspondence of sorts. But it would be more accurate to say that, like Aristotle, Epicurus distinguished between forced and natural motion, and between the voluntary and non-voluntary movements of animals. Whether there is a correspondence between the swerve and Aristotle's account of voluntary motion depends, in the first place, on an understanding of how the swerve functions in Epicurean psychology. The first task, therefore, is to examine Lucretius' account of voluntary motion at 2. 251–93. Englert turns to this text in ch. 4.

According to Englert, Lucretius shows at 2. 251–93 that, in every case of voluntary movement, *voluntas* initiates the movement by means of a swerve. This line of interpretation is not new. What is distinctive

[13] Englert remarks (pp. 18 and 157 n. 1) that I raised difficulties about the traditional interpretation of the swerve as a continuous oblique motion, but fails to mention that I first proposed, with a detailed examination of the evidence, the alternative view that the swerve is a deviation by a minimal space (pp. 4–20 of my dissertation).

[14] pp. 15–16.

[15] pp. 24–5.

[16] pp. 50–5.

about Englert's interpretation does not emerge until after he has discussed Aristotle's analysis of the voluntary in ch. 5 and returns to Lucretius in ch. 6. In his sixth and final chapter Englert explains how the swerve acts as a 'means'. The swerve, he suggests, is a 'tool' used by *voluntas* to execute its desire; as illustrated by the effort of the horses (at Lucretius 2. 263–71), 'the mind desires to move, and begins to when one of its component atoms randomly swerves'.[17] There is some ambiguity in this formulation; but, as Englert makes clear later, he means that the swerve is not a constituent of *voluntas*, but occurs randomly after *voluntas* has been formed.[18]

To return to ch. 4 ('The Swerve and Voluntary Action: Lucretius 2. 251–293'), Englert rightly emphasizes that throughout 2. 251–93 Lucretius presents *voluntas* as an initiator of movement. Englert argues that the two examples, the horses' galloping from the gates and our resistance to external force, illustrate how *voluntas* initiates movement. He also points out that Lucretius associates both the atomic swerve and *voluntas* with a 'beginning' of motion, and that he identifies the atomic swerve as the source of our power to initiate movement. These arguments, however, support equally the Giussani–Bailey interpretation, which holds that the occurrence of a swerve detaches *voluntas* itself (not the implementation of an already formed *voluntas*) from an antecedent chain of causation. Indeed, Lucretius' insistence that *voluntas* is a source of motion, together with his description of 'free will' as 'will that has been torn from fate' (*fatis avulsa voluntas* 257), would seem to incline the balance in favour of the Giussani–Bailey view.

Whereas Lucretius' passage does not, I believe, yield arguments specifically in support of Englert's view, further arguments can be adduced for the general position that there is a swerve at the beginning of every voluntary motion. Lucretius' passage consists of a main premiss (251–60), a second premiss supported by two examples (261–83), and a conclusion (284–93). The basic argument-scheme is: (1) If not A, then not B; (2) but B; (3) therefore A. In accordance with

[17] p. 124. Englert presents the quoted events as a single stage in the following sequence: (1) the horse is poised at the gate, (2) the gate is opened, and images of it strike the horse's mind, (3) the horse's mind focuses on images of running, (4) as quoted, and (5) the swerving atom strikes other atoms, which in turn strike others. Englert also states that after the mind has focused on the appropriate images '*voluntas*, or desire, occurs, and initiates the action by means of the swerve' (p. 125).

[18] pp. 127–8; 'it is only after . . . a desire for the action is felt by the creature, that the swerve comes into play' (p. 128).

Epicurean methodology, A is a 'non-apparent' (or 'unobserved', ἄδηλον) state of affairs, B is an observed state of affairs, and A is a cause of B.[19] In the first section (251–60) Lucretius asks: If the atoms do not make a beginning of motion by swerving,

> libera per terras unde haec animantibus exstat,
> unde est haec, inquam, fatis avulsa voluntas
> per quam progredimur quo ducit quemque voluptas,
> declinamus item motus nec tempore certo
> nec regione loci certa, sed ubi ipsa tulit mens? (2. 257–60)

(Whence do animals have this free will all over the earth, whence, I say, is this will, torn from fate, by which we proceed where pleasure leads each one and we likewise avoid motions neither at a definite time nor in a definite place, but where the mind itself has taken [us]?)

Lucretius here formulates the main premiss: (1) If the atoms do not swerve, there is no free will. The second premiss is: (2) There is free will. Lucretius puts this by saying: 'The will makes a beginning of motion' (261–2). We know (2) by observation, as shown by two examples, the horses' galloping and our resistance to external force. The two examples illustrate the two kinds of voluntary motion, pursuit and avoidance. The conclusion, introduced by *quare* at 284, is: (3) The atoms swerve. The whole argument is intended to show that unobserved atomic swerves are the cause of the observed ability of animals (including humans) to freely initiate motion by an act of will.

According to Sextus Empiricus, the Epicureans held that an animal naturally 'proceeds towards pleasure and avoids pain' (ὁρμᾷ μὲν πρὸς ἡδονήν, ἐκκλίνει δὲ τὸν πόνον).[20] Lucretius' description of *voluntas* at 258–9 agrees with this report. *Progredimur* translates ὁρμᾶν, *declinamus* translates ἐκκλίνειν, and *quo ducit quemque voluptas* corresponds to πρὸς ἡδονήν. Lucretius leaves the reader to understand that what we avoid is pain. Lucretius' use of *declinare* to translate ἐκκλίνειν is noteworthy; he previously used *declinare* three times (twice within the past ten lines) to translate παρεγκλίνειν, 'swerve'. Whatever the rhetorical force of this usage, Lucretius links the swerve and voluntary motion explicitly by adding that the two kinds of voluntary motion occur 'neither at a definite time nor in a definite place'. Lucretius previously stated that the swerve occurs 'at an indefinite time' (*incerto tempore*, 218) and 'in indefinite places' (*incertisque locis*, 219). He repeats these

[19] See Asmis, *Epicurus' Scientific Method* (Ithaca, 1984), esp. pp. 197–211, 279–80.
[20] Sextus Empiricus, *M.* 11. 96.

temporal and spatial modifiers in the last line of the entire argument. After asserting that there must be another cause of motion in the atoms, besides weight and blows, to account for our power to initiate motion, he explains:

> Pondus enim prohibet ne plagis omnia fiant
> externa quasi vi. sed ne mens ipsa necessum
> intestinum habeat cunctis in rebus agendis
> et devicta quasi cogatur ferre patique,
> id facit exiguum clinamen principiorum
> nec regione loci certa nec tempore certo. (2. 288–93)

(For weight prevents everything from happening by blows, as though by external force. But in order that the mind itself may not have an internal necessity in doing all things and be forced to bear and suffer as though conquered, this is brought about by a tiny swerve of the atoms neither in a definite place nor at a definite time.)

The weight of the atoms is sufficient to save the mind only from external necessity. What saves the mind from internal necessity is a swerve of the atoms 'neither in a definite place nor at a definite time' (293). Lucretius concludes that the spatially and temporally undetermined swerve of the atoms is responsible for the power of our will to initiate spatially and temporally undetermined motions. Lucretius therefore claims that an indeterminate atomic event is the underlying cause of the indeterminacy of each voluntary motion. This claim would seem to imply that an atomic swerve occurs at the beginning of each voluntary motion.

Against the Giussani–Bailey interpretation, David Furley has argued that the 'internal necessity' from which the swerve saves the mind is 'the necessity imposed by the original constitution of the *psyche*'.[21] On this view, the undetermined 'beginning' made by a swerve occurs separately from the undetermined 'beginning' of each voluntary motion. Furley admits that 'this may seem hard to believe'.[22] What persuades Furley otherwise, however, is Lucretius' claim that the swerve saves the mind from internal necessity. This claim, Furley believes, 'directly contradicts the common account of the Epicurean theory'.[23]

I agree with Furley that Lucretius distinguishes between two kinds of mental necessity: the external necessity of atomic *simulacra* ('likenesses') striking the mind from outside; and internal necessity. But

[21] *Two Studies*, p. 232. [22] Ibid. 177. [23] Ibid. 180.

what is the internal necessity? There is a notion of internal necessity that is entirely compatible with the Giussani–Bailey account. Whereas the weight of the mind's atoms saves the mind from having its motions determined by external forces, there remains the necessity of the mind's responding to the external forces in accordance with its own internal disposition. This type of necessity is not removed by the random occurrence of a swerve some time between birth and the present circumstances. The mind would still not be able to act otherwise than in accordance with its own, present disposition. This internal kind of constraint was recognized by Aristotle and was the subject of vigorous debate in the Hellenistic period. The Stoics adopted the view that, although all actions are determined, the mind none the less has the power to determine its motions by responding to external influences in accordance with its own disposition. The Epicureans rejected this way of saving free will. Following Epicurus, Lucretius identifies determinism with necessity; and he proposes to save the mind from the necessity of always moving in accordance with its own nature by introducing a causal discontinuity at the beginning of each voluntary movement.[24]

Englert's main objection against the Giussani–Bailey interpretation is that it assigns 'free choice' to horses and other non-rational animals.[25] As I have tried to show, Giussani and Bailey did not sufficiently take into account that Lucretius offers an analysis of voluntary motion in general, as it applies to both non-rational and human animals. Bailey does not in fact ascribe 'free choice' to non-rational animals. But whether animals in general can be said to have 'free choice' depends on what is meant by this expression. If 'choice' implies deliberation, it cannot belong to non-rational animals. On the other hand, it makes sense to claim that non-rational animals and

[24] Englert's arguments (pp. 72–3) against Furley's interpretation of 2. 288–93 seem to me unsound. Englert denies that Lucretius' sentence about external force at 288–9 applies to the mind, and suggests instead that Lucretius is referring to a hypothetical Democritean condition in which the movement of the atoms is due entirely to blows and there is no natural downward movement. But Lucretius' claim about force at 288–9 must be applicable to the mind, even though it is not restricted to it (as Furley restricts it). Lucretius' point is that the weight of the atoms offers resistance to blows, both in general and in the case of the mind. The previous sentence (284–7) shows that Lucretius is concerned specifically with the mind. Lucretius then explicitly narrows the reference to the mind in the sentence starting with *sed* (289).

[25] pp. 63, 65–9, also pp. 2–5 of the 'Introduction'. I see no evidence that either Bailey or Furley takes Lucretius' example of the horses as an 'analogy', as Englert claims (p. 67).

children have the capacity to select what they do, whether or not this capacity implies 'free will' or indeterminism. When a horse gallops forth from the open gate rather than stays put, the horse may be said to have selected this action instead of staying put. On the Epicurean view, the ability of animals to select goals constitutes 'free will'. This ability becomes, in the case of rationally developed humans, the capacity to select in accordance with reason, or (if one so defines) the capacity of 'free choice'.

Englert's own view of the swerve as a random motion used by *voluntas* rests, first, on the belief that the swerve cannot be anything but a random motion and, second, on his analysis of Aristotle's theory of voluntary motion. In his fifth chapter ('Aristotle on Voluntary Action') Englert divides Aristotle's 'active natural motion' (that is, voluntary motion) into two kinds: motion that is initiated by ὄρεξις ('desire') and belongs to animals and children; and motion that is initiated by ὄρεξις together with λόγος, and which is restricted to adult human beings.[26] What makes ὄρεξις 'active', according to Englert, is that it uses connate pneuma (συμφυτὸν πνεῦμα) as a tool to initiate motion.[27] The connate pneuma, Englert proposes, brings it about that ὄρεξις does not simply respond passively to the external object of desire. Instead, connate pneuma 'seems to react to and amplify the motion' it receives from the image (φαντασία) and 'provides the "burst of energy" needed to move the limbs'.[28]

Aristotle's account of voluntary movement varies from text to text, and its interpretation is highly controversial. The role of connate pneuma, in particular, raises thorny problems of how the soul is related to the body. I can only touch on some aspects of Englert's treatment of these difficulties.[29] But one difficulty deserves special notice because it is directly relevant to an understanding of Epicurean free will. As Englert points out, Aristotle calls both the object of desire (ὀρεκτόν) and the desire (ὄρεξις) an ἀρχή of motion.[30] The former is a final cause, which moves without being moved; the latter is an efficient

[26] p. 84. [27] pp. 91–4. [28] p. 93.

[29] Several translation errors have crept into this chapter. Englert repeatedly translates δι' αὑτόν (δι' αὐτόν) as 'through oneself' ('through the agent') (e.g. on pp. 80, 110–11) instead of 'because of oneself (himself)'. Aristotle's use of διά with the accusative must be distinguished from the Stoic use of διά with the genitive (p. 114). The pronoun ὅν (p. 78) refers to a person, not an object. Also, the scope of ἔμψυχα cannot be restricted to human beings, as Englert proposes (p. 80).

[30] p. 87. The key passages are *De anim.* 3. 10, 433^{a}9–^{b}30, and *De motu anim.* 701^{a}26–702^{a}21.

cause, which moves by being moved. Englert regards the object of desire as an external object, acting on the desiring faculty from outside; this external influence, he supposes, is resisted by the inner strength of the connate pneuma.[31] How, Englert asks, can Aristotle reconcile this belief in an external cause with the claim, to which he is clearly committed, that the beginning of a voluntary motion is within the individual?[32] Englert suggests that the distinction between two kinds of causes, final and efficient, removes the apparent clash.

This distinction, however, is only part of the answer. The reason there is no clash is that the object of desire as such is not an external cause. In so far as a perceptible or intelligible object is an object of desire and acts as a final cause, it does not act from outside, but within the individual. It is possible for an object of perception to act on an individual from outside so as to become an object of desire. But as an object of desire, it exists within the individual. The ὀρεκτόν appears in an image (φαντασία) that comes to be through perception or thought; and as soon as it appears, it sets ὄρεξις into motion. Englert's analysis of the sequence of events as (1) ὀρεκτόν, (2) αἴσθησις or νόησις, (3) φαντασία, (4) ὄρεξις, is therefore misleading.[33] The ὀρεκτόν as such does not come into being until there is a φαντασία; and ὀρεκτόν and ὄρεξις are joined together as internal ἀρχαί of motion.[34]

[31] Englert's interpretation of the object of desire as an external object agrees with Furley's analysis in *Two Studies*. Here Furley presents voluntary movement as a purely mechanical response to an external stimulus (pp. 215–19). Furley modified his view in 'Self-Movers', in G. E. R. Lloyd and G. E. L. Owen (eds.), *Aristotle on Mind and the Senses: Proceedings of the Seventh Symposium Aristotelicum* (Cambridge, 1978), 165–79, repr. in Furley, *Cosmic Problems* (Cambridge, 1989), 121–31). In this article Furley maintains that whereas in *De anim.* 3. 10, and similarly in *Phys.* 8 and *De motu animalium*, the unmoved mover is 'not the soul or any "part" of the animal, but something external to it' (*Cosmic Problems*, 126), in *NE* 3. 5 Aristotle presents the ὀρεκτόν as something that 'cannot be identified as such independently of the ὀρεκτικόν', so that 'in this sense the ἀρχή of action produced by desire is "inside" the agent' (*Cosmic Problems*, 129). In my view, none of the Aristotelian texts implies that the ὀρεκτόν in voluntary motion is an external object.

[32] Aristotle states this position, which is part of his definition of voluntary movement, at *NE* 1111^{a}22–4 and 1113^{b}19–32, and *EE* 1224^{b}7–15.

[33] p. 88 (repeated at p. 122). Englert bases this scheme on *De motu anim.* 702^{a}17–19.

[34] According to *De anim.* 431^{a}8–16, the ὀρεκτόν comes into being when an object of perception or thought is judged pleasant or painful, i.e. good or bad. When this judgement is made, pursuit or avoidance occurs. Aristotle remarks that the perceptual faculty is not different from the faculties of pursuit and avoidance, but their 'being' (τὸ εἶναι, 431^{a}14) is different. The perceptual faculty in itself is not a beginning of motion; but in so far as the perceived object is judged good or bad, the perceptual faculty may be said to be a beginning of motion (cf. *NE* 1139^{a}17–22 and *De motu anim.* 701^{a}29–36). I tried to show in my dissertation that, as a goal-directed movement, a voluntary movement is 'not necessitated by antecedent conditions' (p. 65).

In his sixth chapter ('The Swerve and Epicurean Psychology'), Englert applies his analysis of Aristotle to Lucretius. He now examines the section in book 4 (lines 877–91) in which Lucretius explains how animals move. The crucial lines are:

> dico animo nostro primum simulacra meandi
> accidere atque animum pulsare, ut diximus ante.
> inde voluntas fit; neque enim facere incipit ullam
> rem quisquam, ⟨quam⟩ mens providet quid velit ante.
> id quod provident, illius rei constat imago.
> ergo animus cum sese ita commovet ut velit ire
> inque gredi, ferit extemplo quae in corpore toto
> per membra atque artus animae dissita vis est. (4. 881–8)

(I say that first likenesses of walking fall upon our mind and strike the mind, as we said before. Then will comes to be; for no one begins to do anything until the mind has seen beforehand what it wills. An image is formed of what it foresees. Therefore when the mind moves itself in such a way that it wills to go and to proceed, it strikes immediately the force of the soul that is scattered throughout the limbs and joints within the whole body.)

Englert takes *simulacra* (881) to correspond to Aristotle's φαντασία, and *voluntas* to correspond to ὄρεξις. To be precise, *imago* (885) corresponds to Aristotle's φαντασία; *simulacra* are the atomic arrangements that strike the mind from the outside.[35] Englert suggests that just as Aristotelian ὄρεξις brings about the motion of the animal by the 'active' movement of its tool, the connate pneuma, so *voluntas* brings about the movement of the animal by the self-movement of a random swerve.

It has often been pointed out that the cited passage of Lucretius does not contain any mention of the swerve. This omission has been taken as evidence that Lucretius did not posit a swerve at the beginning of every voluntary movement. Englert agrees with those who suppose that *sese ... commovet* (886), together with Lucretius' previous explanation of *voluntas* at 2. 251–93, implies a swerve. There is indeed no need for another reference to the swerve: Lucretius has already explained that the movement of *voluntas* is due to the swerve. But how well does the passage agree with Englert's view that after *voluntas* is formed, it uses a random swerve to initiate motion?

[35] Englert claims (p. 122) that nothing in Lucretius' account corresponds to the events prior to the formation of φαντασία in Aristotle's account; but certainly the arrival of *simulacra* from the outside is prior to the formation of *imago* within the mind.

In the quoted lines, Lucretius proposes a sequence of three stages: (1) an image of what is subsequently willed (walking) is produced by *simulacra* coming from outside; (2) will, consisting of a self-movement of the mind, comes to be; (3) the mind immediately strikes the rest of the soul. 'For' (883) explains why the arrival of *simulacra* must precede the formation of will: the mind must be able to see first what it 'wills' (*velit*, 884). After explaining the antecedent conditions of *voluntas*, Lucretius returns at 886 (*ergo*) to *voluntas* itself. He now describes the formation of *voluntas* as follows: 'when the mind moves itself in such a way that it wills (*velit*) to go'. *Velit* is the verbal form corresponding to the noun *voluntas*; and Lucretius uses this verb to show that willing (*velle*), or *voluntas*, consists in a self-movement of the mind. The physical self-movement of the mind's atoms is such that it has the mental characteristic of 'willing'. As soon as the will is formed by the self-movement of the mind, the mind strikes the soul that is scattered throughout the body.[36]

Lucretius' sequence is in short: (1) an image of what is willed is formed by *simulacra*; (2) the mind moves itself in an act of will; (3) the will moves the soul; subsequently the soul moves the body. On Englert's view, the second stage would need to be divided into two stages: (*a*) the formation of the will; and (*b*) the subsequent occurrence of a self-moving, random swerve. The text contains no evidence of such a split, nor is there a corresponding split in Aristotle's analysis.

The corresponding stages in Aristotle's account are: (1) an image of the object of striving (ὀρεκτόν) is formed through perception or thought; (2) the ὀρεκτόν immediately sets ὄρεξις in motion; (3) and subsequently, ὄρεξις moves the body by means of the connate pneuma. Both Lucretius and Aristotle posit: (1) an object of striving (ὀρεκτόν, *quid velit*); (2) striving (ὄρεξις, *voluntas*); and (3) a movement produced by striving. Both regard the act of striving as a goal-directed movement, which has its beginning in the individual. In Aristotle's

[36] In his analysis of Lucr. 4. 877–906 Don Fowler proposed that, instead of initiating the voluntary movement directly, the swerve initiates the voluntary act of viewing the object of desire ('Lucretius on the Clinamen and "Free Will"', in *Συζήτησις*, 329–52, esp. pp. 340–4). According to Fowler, the will (*voluntas*) consists of an act of viewing (ἐπιβολή) an image; the act of viewing is then followed mechanically by the animal's movement. However, Lucretius clearly places the act of viewing before the formation of *voluntas*, as shown by the explanatory *enim* (883) and temporal *ante* (885). Fowler's interpretation is partially right in so far as it suggests that *voluntas* consists in an attitude taken towards an image: at the very moment when *voluntas* strives for the presented object as a goal, it moves itself by a swerving motion.

analysis, the ὀρεκτόν 'moves' ὄρεξις, not mechanically, but as a goal that is sought by the animal. In Lucretius' atomist system, if one thing moves another, it necessarily moves it mechanically and deterministically. The only escape from a mechanical process of causation is the occurrence of a swerve; and when the swerve occurs, the swerving thing can no longer be said to 'be moved'. Instead, it makes its own 'beginning' of motion, or, in other words, 'moves itself'. Epicurus removed teleology from the ordering of the physical universe; but he recognized it in the voluntary motion of animals. To prevent an animal's goal-directed striving from being a mechanical response, he posited a swerving motion at the beginning of each act of striving. Therefore, whereas Aristotle analyses the ὀρεκτόν as 'moving' ὄρεξις, and ὄρεξις as 'being moved' by the ὀρεκτόν, Lucretius describes *voluntas* as 'self-moving'. Both are agreed that an animal initiates motion by striving towards a goal.

If this interpretation is correct, the swerve does not serve as a tool, but is a way of accommodating goal-directed movement. As for Aristotle's connate pneuma, it provides the strength needed by ὄρεξις to move the animal.[37] Its most plausible counterpart in Epicureanism is the arrangement of the mind and soul atoms, which have the strength to move the whole body. If, as Englert believes, the connate pneuma has a special active force that resembles the active force of a swerving atom, the whole psychic complex of atoms, beginning with a swerve, might be taken to correspond to the role of connate pneuma in voluntary movement. But Aristotle's notion of connate pneuma does not, it seems to me, support the position that the Epicurean swerve has a role only in implementing the will. What would the swerve contribute to the implementation of the will? It has no strength that the non-swerving atoms would not have. Nor is there any need for the occurrence of an undetermined movement at the stage of execution. There is no reason to suppose that the will cannot act as it desires through pre-established channels.[38]

[37] *De motu anim.* 703ª4–10.

[38] Englert's analysis is influenced by Trevor J. Saunders's distinction between the formation and the implementation of the will ('Free Will and the Atomic Swerve in Lucretius', *Symbolae Osloenses*, 59 (1984), 37–59). Saunders suggested that, whereas the swerve does not occur in ordinary voluntary movements (as explained by Lucretius at 4. 877–906), it does occur in the execution of voluntary movements that require a special effort (as illustrated by Lucretius at 2. 251–93). Saunders interprets the swerve as a random motion that allows an animal to break out of pre-established patterns by a special effort. This interpretation faces the objection that even if the horses' galloping and our resistance to external pressure were chosen by Lucretius to illustrate a special

There remains the difficulty of how a random swerve can account for a goal-directed movement. This difficulty has inspired most of the work on the swerve in the last twenty-five years. Since Furley, scholars have explored ways in which random swerves might be seen to provide opportunities that are somehow used by the mind to act freely.[39] Englert's book is the most comprehensive study yet made in this endeavour. I do not believe that Englert's attempt to shift the swerve from the formation of the will to its implementation provides a plausible solution. David Sedley has suggested another way, which might be taken to mediate between the two opposing views that the swerve must always be random and that it can be self-determined.

Sedley suggests that the will is an 'emergent' property that uses the swerving capacity of atoms to direct the atoms along channels that are not predetermined.[40] On this view, our volitions make the atoms swerve. Sedley admits the difficulty that the swerve is said to be uncaused.[41] His response to this difficulty is that the swerve lacks only a physical cause; it does not lack a non-physical cause. Sedley's proposal depends on the claim that the self is an 'independent causal factor', capable of exerting an influence on the constituent atoms by a 'top–down' process of causation.[42] I do not believe that this notion of emergence is applicable to Epicureanism. I shall conclude by

type of voluntary motion—strenuous motion—what is needed in these cases of strong physical effort is not a random rearrangement of the mind's atoms, but special physical strength. This is not to deny that a swerve might allow an individual to break out of a pre-established character pattern; but this mental type of effort is not the type of effort depicted in Lucretius' examples.

[39] Knut Kleve's short paper 'Id facit exiguum clinamen', *Symbolae Osloenses*, 55 (1980), 27–31, gave an important impetus to these studies. Kleve agreed with Furley that, as a random motion, the swerve cannot initiate an act of free will; but he suggested that instead of there being just one swerve, or a few swerves, in a person's life-history, there are frequent swerves in the mind. The will is free, according to Kleve, because the mind can utilize these swerves, which present possibilities of mental development. Saunders, Englert, and Sedley all build on this view. It should also be noted that some scholars have denied that the swerve has any role in voluntary motion. Maurice Pope has proposed that the swerve does not belong within the soul at all: the swerves are spontaneous movements that have a function only in world creation ('Epicureanism and the Atomic Swerve', *Symbolae Osloenses*, 61 (1986), 77–97). Similarly, Patrick Conway has suggested that the swerve has no direct role in free action, but is 'a basic feature of atomism' ('Epicurus' Theory of Freedom of Action', *Prudentia*, 13 (1981), 81–9, at p. 87).

[40] 'Epicurus' Refutation of Determinism', in *Συζήτησις*, 11–51, esp. pp. 40–3.

[41] Ibid. 42. Englert is convinced by this objection (p. 143).

[42] 'Epicurus' Refutation of Determinism', 40–1. Sedley has elaborated this view in 'Epicurean Anti-Reductionism', in Jonathan Barnes and Mario Mignucci (eds.), *Matter and Metaphysics* (Naples, 1988), 297–327 (esp. p. 318).

suggesting some rough distinctions that seem to me to count against Sedley's view.

Whether, in Epicureanism, the will or any other feature of our experience is an 'emergent' entity depends on how 'emergent' is defined. If 'emergent' simply means 'new'—not yet existing at the level of the unobserved atoms—then all the features of our experience are 'emergent'. Even if 'emergent' implies 'unpredictable' or (alternatively) 'not explainable' in terms of the underlying atoms, these features might still be regarded as 'emergent' in Epicureanism. For it is impossible for anyone to have sufficient knowledge to predict, for example, that a certain configuration of inanimate material will acquire life, or to explain fully what complex of atomic motions accounts for thought. Are the features of our experience, then, not 'explainable in principle' according to the Epicureans? If so, one might be tempted to hold that, in Epicureanism, the features of our experience are not 'reducible' to atomic configurations.

But here a distinction needs to be made. Although it is impossible for anyone to specify completely what atomic conditions produce life, or thought, or any other feature of our experience, it is a basic doctrine of Epicurean physics (which Epicurus thought he could prove) that everything in our experience is caused by atoms having certain properties, together with void, and by nothing else. Even though it is impossible for anyone to set out fully the atomic conditions of life, thought, will, and so on, it is certain that these features are wholly the result of atoms interacting with each other in accordance with certain fundamental physical laws. The features of our experience are, in this sense, wholly explainable in terms of the underlying atoms. In other words, every feature of our experience is reducible to atoms (together with void) and certain basic properties of the atoms, even though the details of the reduction cannot be fully known.

If, for example, a volition initiates a movement of the body, the volition is explainable as the effect of underlying atoms. The volition, which occurs at the observational level, has in turn an effect on the underlying atoms; but this interaction must itself be explainable as an activity of the constituent atoms. Suppose, then, a person 'wills' to jump on the bus. If the atoms that cause this act of will cannot move except by a deterministic, mechanical response to other atoms, the will is determined. Epicurus believed that we know by sensory experience that our will is not determined. When a person 'wills' to jump on the bus, therefore, there is an undetermined swerving motion

in the atomic complex that constitutes the mind. This set of motions constitutes the will, just as other types of atomic movement constitute thought or life. The swerve cannot thwart our desire, except as a constituent of another desire; nor is it under the control of some independent desire. How can it be a constituent of will? Epicurus considered it sufficient to prove that there is, at the fundamental level of causation, a motion that permits the will to be free. How the swerving motion is transformed into will is a puzzle that Epicurus did not claim to be able to answer.

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